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UNITED STATES DISTRICT COURT
NORTHERN DISTRICT OF CALIFORNIA

PETER MAI and DIEGO NIÑO, on behalf of
 themselves and all others similarly situated,

Plaintiffs,

v.

SUPERCELL OY,

Defendant.

Case No. 5:20-cv-05573-EJD

**FIRST AMENDED CLASS ACTION
 COMPLAINT**

CLASS ACTION

District Judge Edward J. Davila
 Courtroom 4, 5th Floor

Complaint Filed: August 11, 2020

Trial Date: Not Set

JURY TRIAL DEMANDED

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1 “We should be very reticent of creating an experience where the outcome can be
2 influenced by spending money. *Loot boxes play on all the mechanics of gambling except*
3 *for the ability to get more money out in the end.*”

4 “Do we want to be like Las Vegas, with slot machines or do we want to be widely
5 respected as creators of products that customers can trust?”

6 “*We have businesses that profit by doing their customers harm.*”

7
8 - Tim Sweeney, Co-Founder of Epic Games

9
10 “**No company should be setting kids up for addiction by teaching them to gamble on**
11 **the content of these loot boxes.**”

12 - Claire Murdoch, Mental Health Director of United Kingdom’s National Health Service
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Plaintiffs Peter Mai and Diego Niño (“Plaintiffs”) file this First Amended Class Action Complaint against Supercell Oy (“Supercell”). Plaintiffs bring this action based upon personal knowledge of the facts pertaining to themselves, and on information and belief as to all other matters, by and through undersigned counsel.

NATURE OF THE ACTION

1. Supercell has devised a highly lucrative scheme to monetize its “freemium” video games through the development, promotion, and sale of “loot boxes.”¹ Loot boxes are a type of game of chance that cause and exploit the same form of compulsive behavior and addiction caused by other gambling activities. Similar to slot machines and other games of chance, loot boxes offer the randomized chance to win valuable prizes. Playing a loot box takes no skill. One simply pays money and then clicks on the loot box, like a gambler pulling the arm of a slot machine. The loot box then lights up, flashes, and makes noises to build excitement as the player anxiously waits to see if he or she will win a rare and valuable prize. The chance of winning a prize is intentionally randomized, with the more desirable prizes much more difficult to win. Playing a loot box is a gamble because one never knows what the player will win until after the wager is made and the loot box is opened. Sought-after prizes include important or better characters, or some other in-game item or feature to enhance gameplay or provide competitive advantage. By design, the prizes that are the least likely to be won are the most valuable to players.

2. Even though its games are free to initially play and download, over the last several years Defendant’s Brawl Stars and Clash Royale games have brought in over four billion dollars through in-game purchases by players. These two games are marketed to children and adults, and age-rated by Supercell for everyone nine years or older. A substantial percentage of Supercell’s huge revenues come from the in-game purchases of what the video gaming industry, elected officials, government regulators, and social scientists including psychologists call “loot boxes.”

¹ Today, the overwhelming majority of revenue in mobile gaming derives from free-to-play or “freemium” model games. “Freemium,” a combination of “free” and “premium,” is a pricing strategy by which a basic product or service is provided free or charge, but money (a premium) is charged for additional features, services, or virtual (online) or physical (offline) goods and services.

3. The loot box in Brawl Stars is called a “Brawl Box,” and the loot box in Clash Royale is called a “Royal Chest.” The loot boxes look like this:

Clash Royale



Brawl Stars



4. Economists studying this issue find loot box prizes are things of value. They have financial, utility, hedonic and inherent perceived value. This is also apparent based on the vast sums spent to obtain these prizes originally from Supercell and through their sale in the aftermarket. Supercell also creates value by assigning varying degrees of rarity to them. Supercell purposefully limits the availability of certain prizes so their scarcity increases their value; conceptually like the JPG file by the artist Beeple that recently sold at an art auction for \$69.3 million. Beeple’s JPG file is nothing but a virtual image that could be infinitely, indefinitely, and perfectly duplicated. However, because the artist made the JPG file scarce—limited to just one copy—it broke art sale records.² The virtual file has immense value to the purchaser, which is why the purchaser was willing to pay money for it, just like the virtual prizes offered through loot boxes.

² See, e.g., Scott Reyburn, *JPG File Sells for \$69 Million, as ‘NFT Mania’ Gathers Pace*, N.Y. Times, Mar. 11, 2021.

5. Loot boxes constitute an illegal gambling game under California law and their sale violates public policy and is immoral, unethical, and unscrupulous. The California Legislature has declared gambling against public policy and has enacted laws broadly defining and prohibiting it. “[T]o protect the public health, safety and general welfare of the residents of this state,” California’s Gambling Control Act prohibits having involvement in unlicensed games of chance, Penal Code section 337j prohibits exposing for play or receiving any revenue from any unlicensed game of chance, and Penal Code sections 330a, 330b and 330.1 prohibit the control, operation, dissemination, and even any agreement relating to gambling devices. As the Legislature declared: “Gambling can become addictive and is not an activity to be promoted or legitimized as entertainment for children and families.” Cal. Bus. & Prof. Code § 19801(c). The Legislature also passed the Unfair Competition Law to curtail new schemes that violate fundamental rules of honesty and fair dealing, specifically including “new schemes which the fertility of man’s invention would contrive.” *Cel-Tech Comms, Inc. v. Los Angeles Cellular Tel. Co.*, 20 Cal. 4th 163, 181 (1999).

6. Governments, regulators, religious leaders, psychologists, and other researchers agree loot boxes are predatory gambling games that foster, create, and reinforce compulsive and addictive behaviors. Researchers agree loot boxes have all the structural and psychological hallmarks of gambling and correlate with compulsive behavior and problem gambling among children, teenagers, and adults. The proven link to problem gambling is robust. Loot box purchasing has been found to be positively correlated with problem gambling severity in at least 12 published scientific studies. This “[r]esearch has consistently reported a connection between loot boxes and problem gambling.”³ Given the structural and psychological similarities, researchers recognize loot boxes as the “gambification of gaming” (Brooks & Clark 2019) by using “predatory monetization schemes” that “take advantage of players’ irrational decision-making biases” (Xiao 2020) and disguise long-terms costs to “entrap” the player in a belief that repeated spending of money is

³ Leon Y. Xiao, *Which implementations of loot boxes constitute gambling? A UK legal perspective on the potential harms of random reward mechanisms*, Intl J Ment Health Addiction, DOI: 10.1007/s11469-020-00372-3 (Aug. 24, 2020).

justified as it increases the likelihood of obtaining valuable items (King & Delfabbro 2018). The “disguised character” of the loot box gambling game “is extra problematic in the case of children.”⁴

7. Numerous regulators around the world have prohibited or restricted the use of loot boxes. Countries that have expressly regulated or are considering regulations of loot boxes include the Netherlands, Belgium, Brazil, Germany, the United Kingdom, Japan, France, Spain, New Zealand, Australia, and China.

8. By designing and using its video games and loot boxes to foster and exploit compulsive behavior and irrational decision-making biases, Supercell has made billions of dollars in violation California’s gambling laws and established public policies designed to protect children, families, and other consumers from this type of predatory conduct.

9. Plaintiffs bring this action on behalf of all persons who paid for a play on a loot box within Supercell’s Clash Royale or Brawl Stars video games. On behalf of themselves and the Class, Plaintiffs assert claims for violations of the unlawful prong of Californian Business & Professions Code § 17200, the unfair prong of California Business & Professions Code § 17200, the Consumers Legal Remedies Act, and unjust enrichment for damages, restitution, and injunctive relief. Plaintiffs, on behalf of the general public, also seek a public injunction in accordance with the McGill Rule (*McGill v. Citibank, N.A.*, 2 Cal. 5th 945 (2017)).

THE PARTIES

10. Plaintiff Peter Mai is a citizen of the State of California and a resident of Santa Clara County. Since at least 2016, Plaintiff Mai has owned and played Clash Royale, a game developed, owned, marketed, sold and distributed by Defendant Supercell. Plaintiff Mai downloaded Defendant’s Clash Royale mobile game through the Apple App Store on to his Apple iPhone mobile device. In the course of playing Clash Royale, and as a result of Supercell’s predatory loot box scheme described herein, Plaintiff Mai has been induced to spend money to purchase the in-game loot boxes. Plaintiff Mai did so by purchasing loot boxes directly in Clash Royale with real-world

⁴ Belgian Gaming Commission, *Research Report on Loot Boxes* (April 2018), available at https://www.gamingcommission.be/opencms/export/sites/default/jhksweb_nl/documents/onderzoekrapport-loot-boxen-Engels-publicatie.pdf

money, and also by purchasing the in-game currency known as “gems” to use on playing loot boxes. Plaintiff Mai estimates he has spent in excess of \$150 to purchase Defendant’s in-game loot boxes (known as “Royal Chests” in Clash Royale) in exchange for the random-chance possibility of winning valuable items. Plaintiff Mai lost both money and property by purchasing loot boxes and suffered injury in fact. Plaintiff Mai lost money two ways: First, he lost money when he bought “packs” and “special offers” that contained loot boxes—he purchased loot boxes directly with real-world money. Second, he lost money when he purchased virtual currency to buy chances on loot boxes and then lost property in the form of the virtual currency when he used it to buy chances on loot boxes. Therefore, Plaintiff Mai lost both money and property as a result of Supercell’s unfair business practices alleged. Plaintiff Mai still owns and wishes to continue to play Clash Royale on his Apple iPhone mobile device free from predatory sales practices. To the extent he and the general public play Clash Royale and other games in the future, Plaintiff Mai and consumers will be subjected to Supercell’s predatory loot box scheme.

11. Plaintiff Diego Niño is a citizen and resident of the State of California. Since approximately January 2019, Plaintiff Niño has owned and played Brawl Stars, a game developed, owned, marketed, sold and distributed by Defendant Supercell. Since approximately August 2016, Plaintiff Niño has also owned and played Clash Royale, a game developed, owned, marketed, sold and distributed by Defendant Supercell. Plaintiff Niño downloaded Defendant’s Brawl Stars and Clash Royale mobile games through the Google Play Store on to his Android mobile device. In the course of playing Brawl Stars and Clash Royale, and as a result of Supercell’s predatory loot box scheme described herein, Plaintiff Niño has been induced to spend money to purchase the in-game loot boxes. Plaintiff Niño did so by purchasing loot boxes directly in Brawl Stars and Clash Royale with real-world money, and also by purchasing the in-game currency known as “gems” in Brawl Stars and Clash Royale to use on playing loot boxes. Plaintiff Niño estimates he has spent at least \$1,100 to purchase Defendant’s in-game loot boxes in Brawl Stars and Clash Royale in exchange for the random-chance possibility of winning valuable items. Plaintiff Niño lost both money and property by purchasing loot boxes and suffered injury in fact. Plaintiff Niño lost money two ways: First, he lost money when he bought “packs” and “special offers” that contained loot boxes—he

1 purchased loot boxes directly with real-world money. Second, he lost money when he purchased
2 virtual currency to buy chances on loot boxes and then lost property in the form of the virtual
3 currency when he used it to buy chances on loot boxes. Therefore, Plaintiff Niño lost both money
4 and property as a result of Supercell's unfair business practices alleged. Plaintiff Niño still owns
5 and wishes to continue to play Brawl Stars and Clash Royale on his Android mobile device free
6 from predatory sales practices. To the extent he plays Clash Royale, Brawl Stars and other games
7 in the future, Plaintiff Niño will be subjected to Supercell's predatory loot box scheme.

8 12. Defendant Supercell Oy is a corporation organized under the laws of Finland, with a
9 principal place of business at Itämerenkatu 11-13, Helsinki, Uusimaa, 00180, Finland. Supercell
10 maintains its principal U.S. office at 555 California St., San Francisco, California, 94104. Supercell
11 is a mobile video game development company whose video games include Brawl Stars and Clash
12 Royale.

13 JURISDICTION AND VENUE

14 13. This Court has diversity jurisdiction over the claims asserted herein on behalf of a
15 nationwide class pursuant to 28 U.S.C. § 1332, as amended in February 2005 by the Class Action
16 Fairness Act. Jurisdiction is proper because:

17 (a) The proposed class includes more than 100 members and many of the class
18 members are citizens of states that are diverse from the state of Defendant's citizenship, the amount
19 in controversy in this class action exceeds five million dollars, exclusive of interest and costs; and,

20 (b) Defendant has purposefully availed itself of the privilege of conducting
21 business activities within the State of California.

22 14. Venue is proper in this judicial district pursuant to 28 U.S.C. § 1391, because a
23 substantial part of the challenged conduct or omissions complained of herein occurred in this judicial
24 district, and Defendant maintains its principal place of business in the United States in this judicial
25 district.

INTRADISTRICT ASSIGNMENT

15. Pursuant to Civil L.R. 3-2(c) and (d), assignment to the San Jose Division is proper because a substantial part of the conduct which gives rise to Plaintiffs' claims occurred in this district and specifically in Santa Clara County where Plaintiff Mai resides.

SUBSTANTIVE ALLEGATIONS**A. Loot Boxes Explained**

16. Video games have been popular for decades. For much of that time, game developers created and sold video games to consumers either directly or through third-party retailers, such as GameStop, a model known as "pay-to-play." Before the widespread use of the internet, pay-to-play was the way video games generated revenue. Under this model, consumers paid an upfront, single price to obtain a fully functional video game. Consumers bought a physical computer disc or cartridge loaded with the game to be played on a console or computer. With the widespread use of the internet, the "free-to-play" model began, which was accelerated by the rise of smartphone use and apps. With the free-to-play model, anyone could download and play the functional game for free, but the game had a mixed variety of paid and free business models with assorted monetization strategies. These strategies included selling advertisements, but also in-app "microtransactions." Microtransactions are transactions where players can purchase virtual items for relatively small amounts of money, and they are commonly employed in free-to-play games. Loot boxes are a form of in-app microtransaction. Combining "free games" with in-game microtransactions is known as the "freemium" video game model. Relying principally on revenues from in-game loot box sales, Supercell's Clash Royale and Brawl Stars follow this freemium model.

17. By 2018, loot box revenue reached \$30 billion per year—vastly exceeding revenue from online casinos of \$3.2 billion.⁵

18. A loot box is a type of in-app purchase that provides a player with a randomized chance opportunity to obtain something of value. Loot boxes are games of chance.

⁵ Garea SG, Drummond A, Sauer JD, Hall LC, Williams MN, *Meta-analysis of the relationships between problem gambling, excessive gaming and loot box spending*, Intl Gambling Studies, DOI: 10.1080/14459795.2021.1914705 (Apr. 26, 2021).

19. In their paper entitled “Predatory monetization schemes in video games (e.g., ‘loot boxes’) and internet gaming disorder,” Professors Daniel King and Paul Delfabbro provided the following description of a loot box:

A loot box refers to an in-game reward system that can be purchased repeatedly with real money to obtain a random selection of virtual items. The low probability of obtaining a desired item means that the player will have to purchase an indeterminate number of loot boxes to obtain the item. Loot boxes resemble gambling slot machines because they require no player skill and have a randomly determined outcome (i.e. prize).⁶

20. Supercell developed the games at issue containing loot boxes and made them available for free download on Apple or Google / Android devices. With respect to mobile gaming, the two dominant players that provide online mobile app transaction platforms are Apple (App Store) and Google (Google Play Store). These companies facilitate the freemium business model for Supercell. Pursuant to agreements made between the parties, Supercell partners with Apple and Google to market and distribute Clash Royale and Brawl Stars, to make the games available for download, and to process the in-game transactions and share in the revenues they generate, including the billions of dollars generated from the sale of Supercell loot boxes and virtual currency.

21. About one billion people have devices loaded with Google’s Android mobile operating system, the most pervasive operating system in the world. To load an app onto one of these Android devices, one must go to the Google Play Store, accessed through its own app that comes preloaded on Android devices. In concert with Google, Supercell promotes and markets its Clash Royale and Brawl Stars video games directly to those with Android devices. Pursuant to agreements between Supercell and Google, Google places the Clash Royale and Brawl Stars video games on virtual shelves in its Google Play Store.

22. Apple’s market share exceeds 50% in the global mobile gaming industry. In concert with Apple, Supercell promotes and markets its Clash Royale and Brawl Stars video games directly to those with Apple iOS devices. Pursuant to agreements between Supercell and Apple, Apple places the Clash Royale and Brawl Stars video games on virtual shelves in its Apple App Store.

⁶ Daniel King and Paul H. Delfabbro, *Predatory monetization schemes in video games (e.g. ‘loot boxes’) and internet gaming disorder*, *Addiction*, 113(11):1967-1969 (November 2018).

23. In concert with Apple and Google, Supercell makes enormous revenues from its free-to-download video games through in-app microtransactions, including loot boxes, something for which the Apple App Store and Google Play Store are ideally optimized.

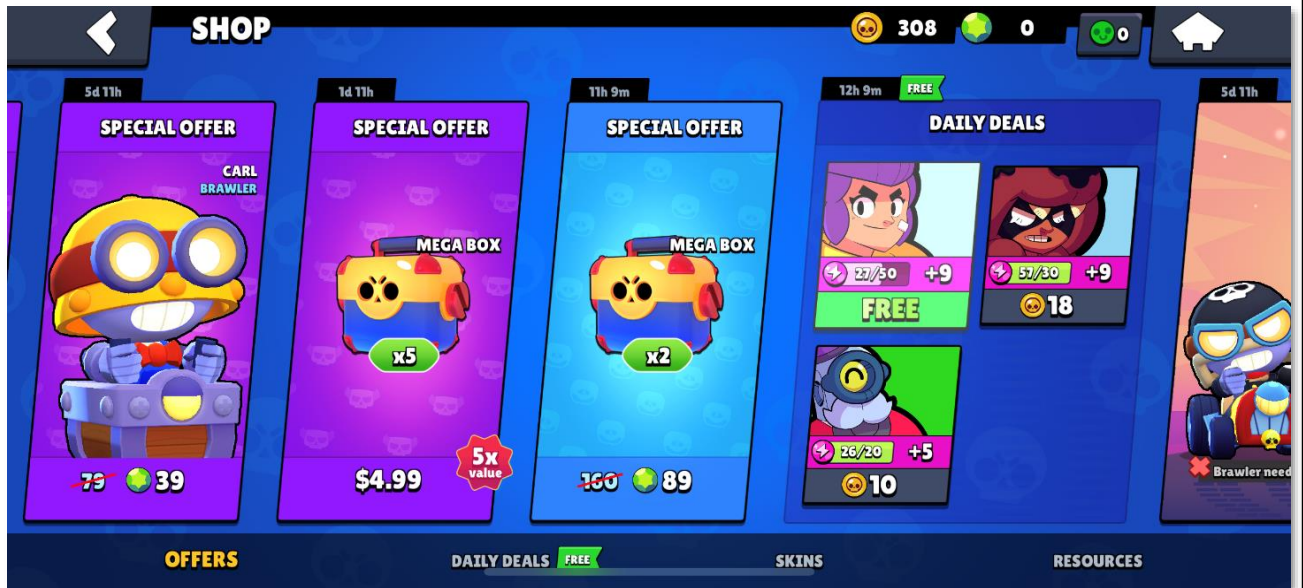
24. Apple and Google are well paid for the assistance they provide in the distribution, development and sale of Supercell's loot boxes, which goes well beyond merely processing payments. An online payment processor charges about 3% for processing payments over the internet. In recognition of the roles Apple and Google play, Apple and Google have a revenue sharing agreement with Supercell where Apple and Google receive 30% of all revenue from the sale of loot boxes through their respective online stores.

25. As alleged above, in the Supercell games, loot boxes are purchased by the consumer through a Google Play-linked Android device (e.g., Samsung smartphones and tablets) or through an Apple App Store-linked device (e.g., iPhones and iPads). Loot boxes are purchased using real-world currency, usually through electronic means of a credit card number on file or by using a Google Play gift card or Apple "iTunes" gift card.

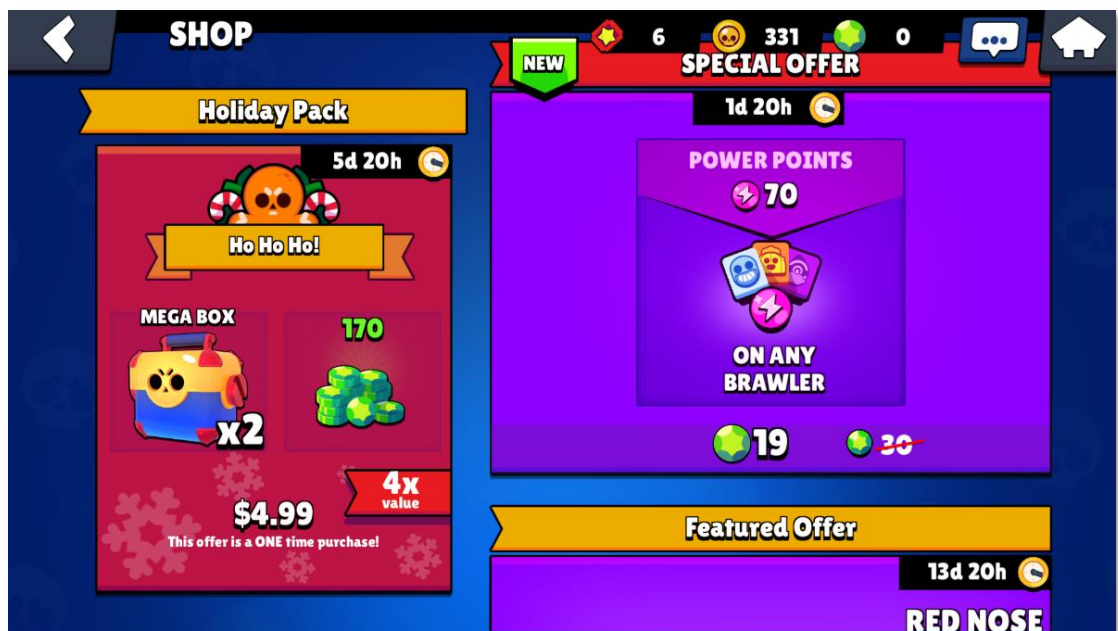
26. For example, if the player is using an Apple iPhone, while playing Defendant's games they can choose to make a purchase in the game itself. Defendant makes its loot boxes available for purchase directly for cash or through the in-game, virtual currency it sells and calls "gems." In both scenarios, the essence of the transaction is the same: paying money to play a loot box for a completely randomized chance at winning a thing of value.

27. As Supercell states, its loot boxes are available to "buy. . . with real money."⁷ For example, the image below is of Supercell's "Shop" within Brawl Stars where it sells loot boxes it calls a "Mega Box" for \$4.99.

⁷ <https://help.supercellsupport.com/brawl-stars/en/articles/different-types-of-brawl-boxes-1.html> ("Shop: Boxes are available in the Shop! What's awesome about this is that you get the option to obtain them through different ways. You can buy them with Gems, Star Points or with real money.").



28. Supercell also markets and sells its loot boxes directly through limited time, “Special Offer” “packs” that appear in the Shop on gamer anniversaries and holidays, and when gamers reach certain levels in the games. These packs can be purchased only once, are only available for a limited number of hours, and include loot boxes for a discounted price. For example, the following image is of a \$4.99 “Holiday Pack” in Brawl Stars that included the direct purchase of two loot boxes called “Mega Boxes,” plus 170 “gems”:



29. The following image is of a \$1.99 “Level 5 Pack” in Brawl Stars that included the direct purchase of one loot boxes called a “Mega Box” plus 80 gems. Supercell marketed this pack

as a limited time “Special Offer”. As shown below, the gamer had 3 days and 23 hours to make the purchase:



30. As with Brawl Stars, Supercell also markets and sells its Clash Royale loot boxes directly for real money through limited time, “Special Offer” “packs” that appear in the Shop on gamer anniversaries and holidays, and when gamers reach certain levels in the games. To create a sense of urgency for players, these packs can only be purchased once, are only available for a limited number of hours, and contain loot boxes for a discounted price. For example, the following image is of a “Legendary Arena Value Pack” for “celebrating your progress to Arena 9”. For \$9.99, Supercell sold this pack which included the direct purchase of one loot box called a “Legendary Chest”:



31. A direct-cash purchase of a loot box using real-world money is straightforward. Upon pressing the \$9.99 button in the example above and then “double-clicking” the side button of the iPhone to “Pay”, that purchase amount is immediately charged to the credit card number on file with the Apple App Store. There is no additional confirmation of any kind. A minor can accomplish the purchase without parental consent, or even parental knowledge.

32. Gamers can also purchase a loot box by buying and spending Supercell’s in-game currency known as “gems.” These gems cost real money and appear as green gems within the games. Gems are then used to purchase a “Chest” or “Box”—the names of the loot box style gambling mechanisms in Clash Royale and Brawl Stars, respectively. Purchasing gems is also simple. Gamers choose the number of “gems” they wish to purchase (30, 80, the “Popular” 170, 360, 950, or the “Best Value” 2000) and then upon double-clicking the side button of their phone to “Pay”, the amount of the purchase (\$1.99, \$4.99, \$9.99, \$19.99, \$49.99 or \$99.99) is immediately charged to the credit card number on file with the Apple or Google stores. As with direct-cash purchases, when buying gem currency, there is no additional confirmation of any kind. A minor can accomplish the purchase without parental consent, or even parental knowledge.

33. For example, the image below is of Supercell's "Shop" within Brawl Stars where it sells a "Big Box" loot box for 30 gems, a "Mega Box" for 80 gems, and the gems Supercell requires to purchase and play these loot boxes.⁸



34. Loot boxes are built around the concept of artificial scarcity. The main idea behind loot boxes is that sales will increase because the more items the gamer already has, the less probable he or she will obtain something new from playing a loot box. The result of this statistical scarcity is that gamers must purchase more loot boxes to increase their odds of obtaining a valued prize on the next purchase.⁹ Not surprisingly, peer-reviewed research demonstrates that "players are indeed determining the value of the loots based on the rarity of the items depicted by the game."¹⁰ Therefore, Supercell's loot box prizes are classified using value-laden words to describe rarity levels, such as "Common," "Rare," "Epic," and "Legendary," depending on the probability of winning the prize.

⁸ The image also depicts that gems can be used for "Coin Packs." Coins are used to "upgrade" the abilities of the Brawler won in the loot box.

⁹ In fact, the manufactured odds of receiving some loot box items are so slim the Nevada Gaming Control Board would declare them illegal for slot machines.

¹⁰ Larche CJ, Chini K, Lee C, Dixon MJ, Fernandes M, *Rare Loot Box Rewards Trigger Larger Arousal and Reward Responses, and Greater Urge to Open More Loot Boxes*, J Gambl Stud, 37(1):141-163 (Mar. 2021).

35. Especially rare loot box items often come with long odds. For example, a “Legendary” Brawler in Brawl Stars has approximately 0.11% probability of appearing in any particular “Brawl Box.” Although there is no guarantee, obtaining a “Legendary” Brawler in Brawl Stars can mean buying hundreds of loot boxes at a cost of \$100 or more, based on these probabilities.¹¹

B. Supercell’s Games Containing Loot Boxes

36. Supercell’s Brawl Stars and Clash Royale games are materially identical for purposes of this lawsuit. The games are rated appropriate for everyone ages nine and up. The games both contain in-game loot boxes that provide the random chance opportunity to win prizes of value. Further, Supercell makes the loot boxes in Brawl Stars and Clash Royale available to purchase from within its in-game shop directly with real money or by using real money to purchase the in-game currency, gems, that are then used to open the loot boxes.

1. Brawl Stars

37. Supercell released Brawl Stars worldwide in December 2018. Brawl Stars is a multiplayer online battle arena game where players battle against other players online in multiple game modes. Brawl Stars generated over \$63 million in its first month, with players in the United States reportedly contributing around 26% of that amount. Within six months Brawl Stars had generated an estimated \$275 million in player spending and 100 million installs worldwide. By the end of its first year, Brawl Stars generated \$420 million in revenue.

38. Brawl Stars is age-rated in the Google Play store as “E” for “Everyone 10+” and Apple’s App Store age-rates Brawl Stars as appropriate for “9+”.

39. Brawl Stars players can unlock different “brawler” characters and play against each other (or the computer). Each Brawler has its own unique offensive or defensive abilities, and own “power levels” and “rarity” ratings. Due to the competitive nature of the game, players want the most rare and best level Brawlers to increase their chances of winning in the game.

¹¹ The probability of receiving a specific item from a loot box is referred to as the “drop rate.” Each Brawl Box provides 3 random draws, and each random draw has the same drop rate of approximately 0.1%.

40. The main way players can obtain new Brawlers is by playing and opening Brawl Boxes. Brawl Boxes award items based on draws. A draw is like pulling on the arm of a slot machine, and just like a slot machine, in exchange for paying something of value to play, the pull provides gamers the opportunity to receive something of value by an element of chance.

41. The loot boxes in Brawl Stars do not provide an opportunity to win additional chances or free play. Instead, the loot boxes in Brawl Stars provide a random chance opportunity to win valuable gems, coins and new Brawlers.

42. Brawl Boxes are purchased in-game in one of two ways. The first way is to purchase a box directly with real money. For example, Supercell charges \$4.99 for two loot boxes called “Mega Boxes” as depicted in Paragraph 27 above. The second way to purchase Brawl Stars’ loot boxes is by using the in-game currency it calls “gems.” Gems can be immediately purchased for real money with the click of a button, or in what is true only in the most technical sense, they can be obtained through hours and hours of gameplay. As one commentator put it: “The harsh reality in Brawl Stars is that there’s no such thing as a free lunch. Yes, the game lets you earn Gems without spending a penny, but this will take an extremely long time.”¹² Having purposefully designed this “slow grind” for gems (i.e., long, frustrating periods of effort), Supercell then entices gamers as young as nine years old with an “easy grind” by providing the immediate solution – spending money.¹³ Supercell makes gems available for purchase at its in-game “store” with real money in varying amounts and prices. For example, Supercell charges \$1.99 for 30 gems (approximately \$0.066 per Gem). With one Mega Box costing 80 gems, that means a gamer may spend \$5.31 to acquire one Mega Box.

43. Brawl Stars’ loot boxes are sold in varying sizes and for different prices. The cheapest box is a regular “Brawl Box” that contains a maximum of 3 random items from one “draw”

¹² <https://playerassist.com/brawl-stars-get-free-gems/>

¹³ In internal documents revealed in April 2021, Electronic Arts, a developer who also sells loot boxes, mockingly refers to currency earned in the game as “grind currency.” See Erica Johnson and Kimberly Ivany, *Video game giant EA steering players into loot-box option in popular soccer game, insider says*, CBC News (April 26, 2021), <https://www.cbc.ca/news/gopublic/fifa21-loot-boxes-electronic-arts-1.5996912>.

(like one pull of the arm on a slot machine). Supercell also sells “Big Boxes” (equivalent to opening 3 regular boxes) and “Mega Boxes” (equivalent to opening 10 regular boxes).

44. Although Google and Apple require Supercell to make the odds of winning available to players, in truth Supercell requires a player to go searching for them, effectively rendering them largely unknown. If ever happened upon, these odds are often abysmal and confusing. In fact, research demonstrates that displaying the odds for loot box rewards is inconsequential to the reasonable person; it “is ineffective at curbing problem gambling behavior because humans do not have the cognitive ability to grasp the remoteness of extreme odds.”¹⁴

45. In order to incentivize players to open more and more Brawl Boxes, Brawl Stars employs an algorithm to slightly increase the odds of receiving a Legendary Brawler each time the player opens a Brawl Box. This feature entices players to purchase additional Brawl Boxes as the player sees his/her chances improve, and works in tandem with the player’s understanding that he/she has already spent a certain amount of money to obtain that better chance of receiving the Legendary Brawler.

46. Supercell continues to market and sell Brawl Stars and its in-game loot boxes to consumers throughout the United States.

2. Clash Royale

47. Clash Royale is a real-time multiplayer battle game where players build their own battle communities and command their characters to take down opponent’s towers all while defending their own. The player who destroys their opponent’s towers first is the winner.

48. Supercell released Clash Royale worldwide on March 2, 2016. Clash Royale was the top grossing game in its first month (\$80 million), and in less than a year on the market Clash Royale reached \$1 billion in revenue. As of October 2018, Clash Royale had amassed an estimated \$2.3 billion in worldwide gross revenue and 354 million all-time downloads. In 2020, Clash Royale generated more than \$207 million in in-app purchase revenues. Five and a half years after its release,

¹⁴ Sheldon Evans, *Pandora’s Loot Box* (November 20, 2020), St. John’s Legal Studies Research Paper No. 20-0015, George Washington Law Review, forthcoming, available at https://papers.ssrn.com/sol3/papers.cfm?abstract_id=3733910.

1 Clash Royale is currently ranked the #2 Strategy game on Apple's App Store and still generates
2 over \$10 million a month in revenue.

3 49. Clash Royale is age-rated in the Google Play store as "E" for "Everyone 10+" and
4 Apple's App Store age-rates Clash Royale as appropriate for "9+".

5 50. Clash Royale is a loot-box based game where new and better characters, spells and
6 buildings are randomly obtained by making direct payments of real-world money to open loot boxes
7 or by purchasing "Gems" with real-world money, which are in turn used to open the different "Royal
8 Chests." These Royal Chests, which contain randomized items of different "levels" and "rarity"
9 scores are purchased with different amounts of Gems, include the "Lightning Chest," "Fortune
10 Chest," "King's Chest," and "Legendary's King Chest." These Royal Chests are the in-game loot
11 boxes that in exchange for paying something of value offer players the opportunity to win random
12 items of value, including characters, spells, buildings, and currency. The best items—known as the
13 "Legendary" characters, spells and buildings—are the most valuable, rare and difficult to get when
14 playing and opening a loot box.

15 51. The loot boxes in Clash Royale do not provide an opportunity to win additional
16 chances or free play. Instead, the loot boxes in Clash Royale provide a random chance opportunity
17 to win valuable gems, gold¹⁵ and new characters, spells or buildings.

18 52. A mobile app game developer described how Supercell designed the loot box
19 mechanics in Clash Royale to be so addicting and effective at driving "long-term retention" of
20 players:

21 Drops are important because the ultimate goal in free to play games is to maximise
22 long-term retention and maximise the cap of the economy. To drive strong long-term
23 retention, players need to have a long lasting sustained desire to pull from the Gacha.
The more drops this takes, the longer the system will last....

24 Even thinking about maximising a single legendary card can show you that it takes
25 a lot of drops. It's reported that Supercell drops 1 legendary card 0.43% of the time
26 in their gold level chests. If we use this as a base, and a pool of 6 legendary cards,
that leaves the % of dropping your chosen legendary to be 0.0716%. In order to
27 upgrade this card fully, you need 37 drops of this card. So, on average, a player will

28 ¹⁵ "Gold" is another valuable in-game item. Gamers use this item to upgrade the abilities of
their existing characters or to purchase new ones.

1 need over 50,000 drops before their single legendary card is fully upgraded. That's
2 a system that LASTS.¹⁶

3 53. The “free-to-play” business model of Supercell’s games is deceptively designed by
4 Supercell to encourage spending and gambling by using game mechanics that create and exploit
5 dissatisfaction and urgency unless money is spent on in-game items and loot boxes. Drs. Hamari et
6 al. studied what drives consumers to purchase in-game items within these so-called “freemium”
7 games. One of the strategies of freemium game developers “has been to increase the desirability of
8 additional products by intentionally increasing the frustration experienced with the free core
9 service.” This strategy of monetizing free-to-play games by creating “demand through
10 inconvenience” includes “employ[ing] gambling-like sale tactics (i.e., gamblification) to persuade
11 users to purchase premium products.”¹⁷

12 54. For example, in Clash Royale, a limited number of loot boxes may be earned by
13 defeating an opponent. However, Supercell designs the game so that players must wait a number of
14 hours (up to 24 hours) to open a single loot box, and only one loot box may be unlocked at a time.
15 To speed up the unlocking (i.e., opening) of the randomized loot box, Supercell entices players to
16 buy and use gems to “Open Now.” And in Clash Royale and Brawl Stars, Supercell creates
17 additional urgency by offering “deals” on loot box purchases for limited time periods, going so far
18 as to set a “timer” in the player’s account for when the “deal” will expire. Thus, Supercell has created
19 a “demand through inconvenience” system to drive consumers to purchase gems necessary to
20 gamble and open the loot boxes that players “earn” but cannot freely open.

21 55. Supercell intentionally manufactures additional inconvenience and incentive to
22 spend and gamble by only allowing a player to have four loot boxes at one time—and only one of
23 these found can be in the midst of the lengthy unlocking process. Thus, while a loot box may be

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25 ¹⁶ Adam Telfer, “Brawl Stars vs Clash Royale: Designing a Strong Gacha,” available at
26 <https://mobilefreetoplay.com/brawl-stars-vs-clash-royale-designing-gacha/>. “Drops” refers to
opening the individual, randomized rewards in loot boxes, and “gacha” is another name for loot
boxes.

27 ¹⁷ Hamari J, Hanner N, & Koivisto J, “*Why pay premium in freemium services?*” *A study on*
28 *perceived value, continued use and purchase intentions in free-to-play games*, International J of
Information Management, 51:102040 (2020).

1 technically “earned” when a player defeats an opponent in a battle, when a player’s four “chest
2 slots” are already filled, an additional loot box cannot be earned.

3 56. Hamari et al. stated the “core idea of the freemium business model is often to impair
4 the use of the free service through designed inconveniences, i.e., to reduce the enjoyment in order
5 to entice users to purchase premium services or features that eliminate the obstacles of the freemium
6 version.”¹⁸ To illustrate some of the ways in which Supercell purposefully impairs the free aspects
7 of Clash Royale to entice spending and gambling, below is a screenshot of a player profile. The
8 player possesses four loot boxes. Only one of the four may be in the process of being “unlocked”
9 and no other loot boxes may be won in battles until one of the four is opened. The player has started
10 the process of unlocking a “Golden Chest.” This “Golden Chest” will open automatically after
11 7 hours and 20 minutes. Or 45 gems may be used to “Open Now” the Golden Chest to reveal its
12 randomized items. Because the player has only 33 gems another 12 must be purchased (using real
13 money) if the player wants to avoid the wait time. As depicted in the second screenshot, Supercell
14 simultaneously markets to the player an ability to purchase gems to immediately open a different
15 loot box (e.g., to purchase and immediately open a “King’s Chest” for 2,000 gems at a cost that
16 exceeds \$9.99).

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27 ¹⁸ Hamari J, Hanner N, & Koivisto J, “*Why pay premium in freemium services?*” *A study on*
28 *perceived value, continued use and purchase intentions in free-to-play games*, International J of
Information Management, 51:102040 (2020).



57. Supercell continues to market and sell Clash Royale and its in-game loot boxes to consumers throughout the United States.

C. Loot Boxes Create and Reinforce Addictive Behaviors Akin to Gambling Addiction

58. Loot boxes were designed to and do create and reinforce the same addictive, compulsive, and other harmful behaviors associated with other gambling activities. Researchers have found this by first examining the structural aspects and cognitive biases created by loot boxes and comparing them to casino games. They next performed quantitative research. Without

exception, they determined loot boxes are strongly associated with problem gambling behavior. Children, teenagers, and others are particularly susceptible to these cognitive traps.

1. Loot Boxes Are Structurally Similar to Traditional Gambling Games and Exploit Gambling's Cognitive Traps

59. "The 'starting block' of problem gambling is often the availability of gambling activities."¹⁹ Recent peer-reviewed research (Zendle 2020) found that 59% of the top-100 grossing games in the Apple App Store contained loot boxes. 24% of these games were rated suitable for children aged 4 and older, 56% suitable for children aged 9 and older, and 95% of suitable for children 12 and older.

60. Like other forms of Internet gambling, the availability and accessibility of loot boxes magnifies the potential for addictiveness and harm. For one, the Internet removes barriers to gambling based on accessibility and convenience. In contrast to land-based gambling activities, individuals can readily and conveniently play a loot box from the comfort of their homes or workplaces, 24 hours a day, seven days a week, without the need to travel. Further, the Internet provides players with a sense of anonymity, allowing the individual to wager privately without apprehension of stigmatization. Researchers have found that Internet gambling is more strongly associated with problem gambling than non-Internet gambling.²⁰ Based on a survey of 473 undergraduate students, Griffith and Barnes (2008) concluded that Internet gamblers were significantly more likely to gamble frequently, with 60% of Internet gamblers reporting having gambled once a week or more, compared to less than 20% of non-Internet gamblers.²¹ Based on analysis of 7,921 gamblers, Wood and Williams (2011) determined that the prevalence of problem

¹⁹ Zendle D, Meyer R, Cairns P, Waters S, Ballou N, *The prevalence of loot boxes in mobile and desktop games*, *Addiction*, 115(9):1768-1772 (September 2020).

²⁰ St-Pierre R.A., Walker D.M., Derevensky J., & Gupta, R., *How availability and accessibility of gambling venues influence problem gambling: A review of the literature*, *Gaming Law Review and Economics*, 18(2):150–172 (2014).

²¹ M. Griffiths and A. Barnes, *Internet Gambling: An Online Empirical Study Among Student Gamblers*, *Int'l J. Mental Health & Addiction*, 6:194–204 (2008)

1 gambling was three to four times higher among Internet gamblers compared to non-Internet
2 gamblers.²²

3 61. The basic physiology behind problems stemming from both freemium app loot boxes
4 and traditional casino games is that the activities exploit the brain's "reward system." The human
5 body has a number of hormones that regulate how one feels at any given moment. Dopamine, known
6 as the "happy hormone," is the dominant power driver and the chief neurotransmitter in the brain's
7 reward system. The chase for that next happy dopamine rush keeps some people making decisions
8 that would otherwise seem unwise. For some this culminates in compulsive behavioral addictions,
9 such as compulsive gambling.

10 62. One of the hallmarks of gambling is uncertainty. Uncertainty, or more precisely, the
11 potential for a reward, plays a crucial role in gambling's attraction and addictiveness. Gambling
12 triggers the brain's reward system which is linked primarily to the brain's pleasure and motivation
13 centers and results in a release of dopamine. The reward uncertainty from gambling makes the
14 gambler feel elated while he or she is "putting it on the line" and taking risks. Gambling stimulates
15 a "thrill" which triggers the brain's reward system to release up to 10 times more than the amount
16 naturally rewarding experiences would produce.

17 63. Psychologists call the principle of how loot boxes work on the mind "variable ratio
18 reinforcement." This kind of reward structure underpins many forms of gambling such as slot
19 machines. It results in people quickly acquiring behaviors and repeating these behaviors frequently
20 in hopes of receiving a reward by thinking they are one step closer to getting the reward the next
21 time. Dopamine cells are most active when there is maximum uncertainty, and dopamine responds
22 more to an uncertain reward than if the same reward delivered on a predictable basis.

23 64. In their paper entitled "Predatory monetization schemes in video games (e.g. 'loot
24 boxes') and internet gaming disorder," Professors Daniel King and Paul Delfabbro described loot
25
26

27 ²² R.T. Wood and R.J. Williams, *A Comparative Profile of the Internet Gambler: Demographic*
28 *Characteristics, Game-Play Patterns, and Problem Gambling Status*, New Media & Society,
13:1123-1141 (2011).

boxes as follows, noting they all involve purchases with real money and resemble gambling slot machines:

A loot box refers to an in-game reward system that can be purchased repeatedly with real money to obtain a random selection of virtual items. The low probability of obtaining a desired item means that the player will have to purchase an indeterminate number of loot boxes to obtain the item. Loot boxes resemble gambling slot machines because they require no player skill and have a randomly determined outcome (i.e., prize).²³

65. As described above, Supercell markets and sells the loot boxes in Brawl Stars and Clash Royale for real-world money. Plaintiffs and other members of the Class purchased loot boxes directly from Supercell with real-world money. To further entice consumers to spend money on loot boxes, many video games, including Supercell's games at issue, also use a "virtual" money system within the game. The spending of real money to obtain the virtual in-game currency is referred to as the "eligibility condition" to buying a loot box. That is, just like a casino exchanges cash for chips, instead of buying loot boxes directly for a set dollar amount, the player must first purchase the in-game currency, which is then used for loot boxes. In-game currencies frequently take the form of expensive-sounding items like "gems" or "gold coins" so the player also feels he or she is getting something of value for the money. The fact that loot box games do not allow the player to put physical money in the slot is not relevant, as contemporary gambling also is typically fully digitized (King et al. 2012). Further, the requirement to convert real money to proprietary currencies is the standard for gambling – with casino chips being the classic example. The use of virtual currency, which must be purchased with fiat currency, is an integral part of the scheme.

66. This intermediate level of virtual currency is acquired through abnormal exchange rates and "odd-pricing." "Odd-pricing occurs when the increments of currency bundles do not match the increments of the virtual currency price items."²⁴ Use of virtual currency and odd-pricing is designed to reduce the salience of the fiat currency cost of loot box purchases and "disconnect" the

²³ Daniel King and Paul H. Delfabbro, *Predatory monetization schemes in video games (e.g. 'loot boxes') and internet gaming disorder*, *Addiction*, 113(11):1967-1969 (November 2018).

²⁴ Advertising Standards Authority, *Guidance on advertising in-game purchases* (September 21, 2021), <https://www.asa.org.uk/uploads/assets/4028c436-5861-4035-8d98c148d3c66b7e/Guidance-on-advertising-in-game-purchases.pdf>

1 gamer from the concern that real money is being gambled. The real money conversion necessary to
 2 purchase loot boxes has been analogized to the deception underlying casinos requiring the use of
 3 exchanged chips as its “in-game currency” because it is known players gamble “significantly more
 4 with chips than real cash.”²⁵ Research has found that loot box systems are more highly associated
 5 with problem gambling when the amount players can spend on loot boxes is hidden behind the
 6 purchase of in-game currency.²⁶

7 67. Likewise, the Children’s Commissioner for England explained “the nature of in-
 8 game purchases—a series of one-off spends—means that children struggle to keep track of how
 9 much they are spending.”²⁷

10 68. According to the United Kingdom’s Advertising Standards Authority, “where a
 11 virtual currency price is stated for an item, advertisers whose products are affected by odd-pricing
 12 should include sufficient information about the costs of their currency bundles to allow consumers
 13 to determine the real-world cost of the item when the virtual currency purchase is taken into
 14 account.”²⁸

15 69. A study by the Gambling Health Alliance involving 611 young people aged 13 to 24
 16 found that “31% of young gamers said they struggled to keep track of how much they spent on loot
 17 boxes and one third (33%) said they did not feel in control of their spending on loot boxes.”²⁹

18 70. Just like casinos handing out free chips or slot plays to loyal gamblers, certain games
 19 also award limited in-game currency for loot boxes as an introductory prize, login bonus, or at

20
 21 ²⁵ Leon Y. Xiao and Laura L. Henderson, *Towards and Ethical Game Design Solution to Loot*
 22 *Boxes: a Commentary on King and Delfabbro*, Int J Ment Health Addiction, 19:177-192 (Feb.
 23 2021). Julius Weintraub coined the famous saying “The guy who invented poker was bright, but the
 24 guy who invented the chip was a genius.”

25 ²⁶ Zendle D, Meyer R, Over H, *Adolescents and loot boxes: links with problem gambling and*
 26 *motivations for purchase*, R Soc Open Sci, 6(6):190049 (June 19, 2019).

27 ²⁷ Children’s Commissioner for England, *Gaming the system* (October 2019),
 28 [https://www.childrenscommissioner.gov.uk/wp-content/uploads/2019/10/CCO-Gaming-the-](https://www.childrenscommissioner.gov.uk/wp-content/uploads/2019/10/CCO-Gaming-the-System-2019.pdf)
 29 [System-2019.pdf](https://www.childrenscommissioner.gov.uk/wp-content/uploads/2019/10/CCO-Gaming-the-System-2019.pdf).

30 ²⁸ Advertising Standards Authority, *Guidance on advertising in-game purchases* (September
 31 21, 2021), [https://www.asa.org.uk/uploads/assets/4028c436-5861-4035-](https://www.asa.org.uk/uploads/assets/4028c436-5861-4035-8d98c148d3c66b7e/Guidance-on-advertising-in-game-purchases.pdf)
 32 [8d98c148d3c66b7e/Guidance-on-advertising-in-game-purchases.pdf](https://www.asa.org.uk/uploads/assets/4028c436-5861-4035-8d98c148d3c66b7e/Guidance-on-advertising-in-game-purchases.pdf)

33 ²⁹ Gambling Health Alliance, *What is the financial impact of loot boxes on children and young*
 34 *people?* (December 2020), <https://www.rsph.org.uk/about-us/news/over-1-in-10-young-gamers->

certain stages of gameplay. In gambling psychology, these earned or free play perks are an addiction hook to give players a “taste” of what can be more quickly purchased and to keep them coming back time after time.

71. In connection with its investigation into loot boxes, the Brussels Gaming Commission reached a similar conclusion about the deceptiveness of gambling with what is perceived to be virtual currency:

The use of points (coins) and especially their size are psychologically very sophisticated and aimed at creating a personal reality which is then disconnected from the real world. FIFA 18 teaches players to think in FUT currency and FIFA coins. . . . In Overwatch and Star Wars Battlefront II, the value of real money is also fully disconnected from the value of the in-game currency, causing players to lose contact with the real value.³⁰

72. In their 2014 book *Virtual Economies*, Professors Vili Lehdonvirta and Edward Castronova explain there are no differences between “real” or fiat currency and virtual currency—“Both the US Dollar and World of Warcraft coins are fiat money.”³¹ That is, “virtual world money” is just a digital form of money like Bitcoin cryptocurrency or other now innumerable examples.

73. Loot boxes rely heavily on additional cognitive traps and behavioral heuristics involved in gambling—doing everything possible to exploit the brain’s reward system and build up the player’s hoped-for win, tension, and excitement, and in the process exploiting cognitive biases such as the gambler’s fallacy, near misses, losses disguised as wins, sunk cost bias, an illusion of control, and the gambling behavior known as chasing.

74. Keith Whyte, Executive Director of the National Council on Problem Gambling, explained to the FTC that loot boxes and slot machines are “so closely related”:

Given all everything we know about the similarities between boxes and slot machines, it would actually be astounding and surprising were there not such a connection. They are, in many ways, so closely related.³²

get-into-debt-because-of-loot-boxes.html.

³⁰ Belgian Gaming Commission, *Research Report on Loot Boxes* (April 2018).

³¹ Vili Lehdonvirta and Edward Castronova, *Virtual Economies: Design and Analysis*, at 191 (2014).

³² Workshop transcript from *Inside the Game: Unlocking the Consumer Issues Surrounding Loot Boxes*. An FTC Workshop (Aug. 7, 2019), available at <https://www.ftc.gov/system/files/documents/videos/inside-game-unlocking-consumer-issues->

75. The similarities between gambling and loot boxes start with audio-visual effects that provide the sensory feedback long used in casinos. For example, in many games (including Supercells' Brawl Stars and Clash Royale games) opening the loot box coincides with triumphant music (like the sounds of falling tokens onto a metal tray, loud buzzing or musical tunes after winning on a casino's slot machine), the loot box itself bursting open with bright lights and colors. Yet these manufactured sound effects and colorful animations often give the player common or duplicate items, and rarely does the player get exactly the item he wanted.

76. Gambling experts have raised concerns because loot boxes play off the identical sensory feedback used in traditional casino games:

I would suggest you watch some of the animations used in games when 'opening a loot box,' try to divorce them from similar animation and sound techniques used on poker machines, you probably won't be able to.

.....

When opening the boxes, the possibilities of what may be ultimately draw for the player is scrolled across before them on their screen. This is identical to the way a slot machine scrolls around before ultimately stopping. As with the slot machine, the graphic display eventually stops on an item, which is given to the player – regardless of whether that is what they desired or not.³³³⁴

77. The loot box lights and sounds exploit the near-miss psychological effect of gambling. When a player clicks on a loot box, the loot box starts to shake or show other dramatic animations. Exciting and suspenseful noises are made. Players often receive a split-second glimpse of a rare items that might be won. Then, the prize is shown, which is typically something of little or no value, such as an item the player already possesses (a double, a common skin, or common weapon), disappointing the player by not winning anything because the player already owns the won prize and therefore will not benefit from it. The intensity of the effect increases when the "reward prediction error"³⁵ is low. This occurs when the player has low expectations, then suddenly

surrounding-loot-boxes-session-2/ftc_loot_boxes_workshop_transcript_segment_2.pdf.

³³ Commonwealth of Australia, The Senate, *Environment and Communications References Committee: Gaming micro-transactions for chance-based items*, at p.37 (Nov. 2018).

³⁴ Similarly, the Belgian Gaming Commission also observed that "the player is confronted with animations that are very similar to animations used in slot machine operation." Belgian Gaming Commission, *Research Report on Loot Boxes* (April 2018).

³⁵ Reward Prediction Error or "RPE" refers to when low expectations award a higher amount

glimpses a rare item the player might receive. For a split second, the player sees, for example, the color or outline of a highly valued prize and with it, a rush of dopamine because the player believes he or she is about to win a rare item – only to be disappointed at the reveal when the particular item is something he already owns. Sometimes, a player will win a rare prize, thereby encouraged to try again and again.

78. Loot boxes employ more than the audio-visual effects and near-miss psychologic triggers associated with traditional gambling mechanisms. Loot boxes are also designed to exploit the other major cognitive biases that explain gambling behavior and create gambling addiction. For instance, loot boxes are designed to create a slot machine effect and play off gambling's cognitive bias characteristic known as the "gambler's fallacy," where even when a player is not receiving the desired result—a frequent occurrence—there still exists a belief and hope that the next loot box will contain the desired item. The bias occurs when "the expectation that the probability of winning increases with the length of an ongoing run of losses."³⁶ This is further reinforced when players view others opening loot boxes and receiving rare prizes. Developers broadcast these types of videos to market loot boxes.³⁷³⁸

79. One researcher described the physical experience invoked by the loot box mechanism. The prime culprit is dopamine and loot boxes' uncertainty boosting its effects:

Research by Kim (1998) found that waiting for the outcome of a gamble can activate the brain's chemical reward system, releasing endorphins that create pleasure. In a gaming context, think of someone who really wants the Pharah Anubis skin in Overwatch. They buy five loot boxes and get excited during the big flashy box-

of dopamine at the unexpected pleasant result of an action or event, and when high expectations award a bigger disappointment to the unexpected disappointing result.

³⁶ Willem A. Wagenaar, *Paradoxes of Gambling Behaviour*, at 13 (2016 ed.).

³⁷ YouTube contains thousands of videos of gamers opening loot boxes in many different games. *See, e.g.*, video of opening Clash Royale chests with over 7.1 million views at: https://www.youtube.com/watch?v=_s9VdobcbrQ. At the 4:20 mark, the gamer demonstrates spending \$100 to purchase gems to open loot boxes.

³⁸ The Children's Commissioner for England reported loot box "openings shared by popular YouTubers, also encourages online spending" with "some children mentioning watching popular YouTubers [] who 'have enough money to buy all the packs', opening FIFA player packs." *See* Children's Commissioner for England, *Gaming the system* (October 2019).

opening animation. This excitement happens five times in a short space of time, with five flashy box-opening animations that are almost an event in itself.

80. Another cognitive bias exploited by loot boxes is known as “sunk cost” bias. Sunk cost bias describes a decision-making heuristic where an individual escalates his or her commitment to a previously chosen, but unsuccessful course of action to justify the prior “investments” in purchasing loot box plays. For example, if a gamer spends \$5 on loot boxes and does not receive the prize he or she was hoping to win, the gamer faces the choice of either stopping and accepting the loss or spending additional money attempting to recuperate the initial loss. Once a player starts trying to recoup the loss it is often hard to stop. This is particularly true for children, teenagers, and others susceptible to problems associated with gambling.

81. Commenting on loot boxes, Hawaiian congressman Chris Lee noted that loot boxes “are specifically designed to exploit and manipulate the addictive nature of human psychology.”

82. Loot boxes are built around the concept of artificial scarcity. The main idea behind loot boxes is that sales will increase because the more items the gamer already has, the less probable he or she will obtain something new from a loot box play. The result of this statistical scarcity is that gamers must purchase more loot boxes to increase their odds of obtaining a valued prize.³⁹ Therefore, loot box prizes are classified using value-laden words to describe rarity levels, such as “Common,” “Rare,” “Epic,” and “Legendary,” depending on the probability of winning the prize. Research concludes “[u]nsurprisingly, rare and popular item are more highly valued.”⁴⁰

83. Loot boxes, including those marketed and sold by Supercell, also often play off notions of seasonal rarity. Seasonal rarity is rarity created around a season, holiday, or special event. The loot boxes and potential prizes are often more aesthetically polished. Most importantly, they are also “time-locked,” meaning a gamer only has a limited time at a chance to win a prize – a “pressuring tactic to incentive purchases” in the moment.⁴¹ The most common time-locked loot

³⁹ In fact, the manufactured odds of receiving some loot box items are so slim the Nevada Gaming Control Board would declare them illegal for slot machines.

⁴⁰ Rockloff M, Russell AMT, Greer MN, Lolé L, Hing N, Browne M, *Loot boxes: Are they grooming youth for gambling?*, NSW Responsible Gambling Fund (2020).

⁴¹ Daniel L. King, *Video Game Monetization (e.g., ‘Loot Boxes’): a Blueprint for Practical Social Responsibility Measures*, Int J Ment Health Addiction, 17:166-179 (Feb. 2019).

boxes are recurrent, with themes like Halloween, Christmas, Chinese New Year, April Fools, Easter, or the game's own anniversary.

84. Larche et al. (2021) conducted experiments that found "loot boxes containing rare items are more valuable, arousing, rewarding and urge-inducing to players, similar to the way slots gamblers treat rare large wins in slots play."⁴²

85. It is most likely a player will win an item that already has been obtained or is otherwise not desirable. However, these "losses disguised as wins," or "LDWs" as they are known among researchers, are another psychological trigger found in both traditional gambling games and with loot boxes. This psychological factor traditionally occurs when a player gains a credit on the spin of a slot machine, but it is fewer credits than the original wager. It also takes place when casinos offer "complementary" food, drinks, and accommodations. This outcome alters the gambler's experience because the player feels like he or she won something out of the ordeal, but actually lost. Obtaining a common or duplicate item when opening a loot box is a loss; it is like "winning a free drink" or "winning \$1" after wagering \$2—the player won something, but net, lost.⁴³

86. A phenomenon known as "chasing" (continuing to gamble to recoup losses) is "one of the central characteristics of pathological gamblers." Chasing is "widely regarded as a defining feature in disordered gambling," is "the most commonly endorsed item in screening tools for disordered gambling," and its presence "establishes and maintains a downward spiral of negative consequences for the gambler's finances, relationships, and mental well-being."⁴⁴ Loot box mechanics unfairly exploit this central behavioral marker of problem gambling behavior. The Children's Commissioner for England studied the impact of gaming and loot boxes in children and

⁴² Larche CJ, Chini K, Lee C, Dixon MJ, Fernandes M, *Rare Loot Box Rewards Trigger Larger Arousal and Reward Responses, and Greater Urge to Open More Loot Boxes*, J Gambl Stud, 37(1):141-163 (Mar. 2021).

⁴³ Graydon C, Stange M, Dixon MJ, *Losses Disguised as Wins Affect Game Selection on Multiline Slots*, J Gambl Stud, 34:1377-1390 (2018) ("Despite the net loss to the player, LDWs are accompanied by salient visual graphics and high fidelity winning sounds...players behaviorally miscategorize LDWs as wins" and "LDWs can lead players to continue gambling despite financial loss, and increase play durations.").

⁴⁴ Ke Zhang and Luke Clark, *Loss-chasing in gambling behaviour: neurocognitive and behavioural economic perspectives*, Current Opinion in Behavioral Sciences, 31:1-7 (Feb. 2020).

found that even though loot box mechanics are “a source of great frustration, the fact that the next pack opening could result in a good player means that children continue to open packs even when they are losing.”⁴⁵ Loss chasing “is associated with altered executive functions, subserved by fronto-striatal brain circuitry” that “giv[es] rise to impulsivity as the tendency to make rapid, hasty gambling decisions in pursuit of winning” (Zhang & Clark (2020)).

2. Loot Box Gambling Exploits Adolescents and Other Vulnerable Populations

87. Children, adolescents, and other vulnerable populations including young men and those with existing gambling problems are especially vulnerable to the type of psychological manipulation at play with loot boxes.

88. One of the well-established risk factors for developing problematic gambling behaviors is age. “[S]tudies suggest that younger age (i.e. younger than 29 year old[]) appears to be a significant risk factor for PG [pathological gambling].”⁴⁶ In fact, “[s]tudies have demonstrated that if gambling situations are presented to adolescents, most will participate to some degree.”⁴⁷ The neurobiology of adolescence explains why adolescents are two to four times as likely as adults to develop gambling problems. In fact, teenage gambling is the fastest growing addiction.

89. First, adolescents have low impulse control.⁴⁸ The teenage brain is still developing; the part of the brain that is responsible for good impulse control and decision making is not fully developed. Dr. Frances Jensen, the chair of the department of neurology at the University of Pennsylvania Perelman School of Medicine and formally Harvard professor and director of neuroscience at Boston’s Children’s Hospital, explains: “their frontal lobes are there. They’re there and they’re built. They’re just not accessed in as rapid a manner because the insulation to the wiring

⁴⁵ Children’s Commissioner for England, *Gaming the system* (October 2019).

⁴⁶ Johansson A, Grant JE, Kim SW, Odlaug BL, Götestam KG, *Risk factors for problematic gambling: a critical literature review*, J Gambl Stud, 25(1):67-92 (March 2009).

⁴⁷ Mary K. Wilber and Marc N. Potenza, *Adolescent gambling: research and clinical implications*, Psychiatry (Edgmont), 3(10):40-48 (October 2006).

⁴⁸ Aaron Drummond and James D. Sauer, *Video game loot boxes are psychologically akin to gambling*, Nature Human Behavior, 2:530-532 (June 2018) (stating that “adolescents tend to have poorer impulse control than adults, potentially increasing their vulnerability to gambling mechanics and behaviours learned from these [loot box] mechanisms”).

1 to them isn't fully developed, so the signals go more slowly. Hence, teenagers are not as readily able
 2 to access their frontal lobe to say, oh, I better not do this. An adult is much more likely to control
 3 impulses or weigh out different factors in decisions, where a teenager may not actually have full on-
 4 line, in-the-moment capacity.” Dr. Frances Jensen, *Why Teens are Impulsive- Prone and Should*
 5 *Protect Their Brains*, NPR (Jan. 28, 2015). Adolescence is a developmental period characterized by
 6 suboptimal decisions and actions. Casey et al., *The Adolescent Brain*, Annals of the New York
 7 Academy of Sciences, 1124(1):111–126 (2008). During this time, impulse control is still relatively
 8 immature. *Id.*

9 90. Second, gambling has an inherent element of risk and adolescents are more inclined
 10 to engage in risk-taking behaviors and risky decision making than are adults. Margo Gardener &
 11 Laurence Steinberg, *Peer influence on risk taking, risk preference, and risky decision making in*
 12 *adolescence and adulthood: an experimental study*, Developmental Psychology, 41L625-635
 13 (2005). Adolescents and young adults are more inclined to risk taking because development of
 14 executive brain function and appreciation of risk is continuing in this period. Kelley et al., *Risk*
 15 *taking and novelty seeking in adolescence: Introduction to Part I*, Annals of the New York Academy
 16 of Sciences, 1021(1):27-32 (2004); Laurence Steinberg, *Cognitive and affective development in*
 17 *adolescence*, Trends in Cognitive Sciences, 9(2):69-74 (2005).

18 91. Third, adolescents are more prone to addiction. “They build a reward circuit around
 19 that substance to a much stronger, harder, longer, stronger addiction. That is an important fact for
 20 an adolescent to know about themselves - that they can get addicted faster.” Dr. Frances Jensen,
 21 *Why Teens are Impulsive- Prone and Should Protect Their Brains*, NPR (Jan. 28, 2015).

22 92. Last, children and adolescents often lack a critical understanding of money and
 23 financial management. Approximately one in four students in the 15 countries and economies that
 24 took part in the latest OECD Programme for International Student Assessment (PISA) test of
 25 financial literacy are unable to make even simple decisions on everyday spending, while only one
 26 in ten can understand complex issues, such as income tax. OECD, PISA 2015 Results (Volume IV);
 27 *Students' Financial Literacy*, PISA, OECD Publishing, Paris (2017).

93. As detailed above, purchasing and opening a loot box is designed to be visually, physically, and aurally stimulating. Opening a loot box gives the player a rush; the moment of anticipation followed by release. The loot box mechanism has been proven to be effective on adults, and its effects are generally intensified when used on minors who are more prone to engage in risk-taking behaviors, more prone to gambling addiction, more likely to have erroneous beliefs of the true odds of gambling activities, and therefore “less equipped to critically appraise the value proposition of these schemes.”⁴⁹

94. Professor David Zendle was one of the invited academic participants to the Federal Trade Commission’s August 2019 workshop investigating loot boxes. Dr. Zendle has published numerous peer-reviewed papers discussing his research and surveys examining links and similarities between gambling and loot boxes. Based on his and others’ scientific findings, Dr. Zendle explained to the FTC the serious potential consequences of exposing vulnerable consumers to video game loot boxes:

That’s what I’m here to talk about today. So the reason why problem gambling is such a big topic when it comes to loot boxes, and why people care about gambling and loot boxes, is because loot boxes look so much like gambling. Both when you’re playing on a roulette wheel or while you’re opening a loot box, you’re wagering something that you have in your hand of value now on the uncertain hope of getting something of greater value later on. It’s that reason that loot boxes have tripped gambling regulations in a couple of countries within Europe, because of those formal similarities, and because of those formal similarities, people are a bit worried for a very long time that loot boxes by act as a gateway to problem gambling, particularly amongst young and vulnerable populations...

We know that one of the main pathways to problem gambling is a process of conditioning, whereby the gambler comes to need and expect the excitement associated with the gambling win. So what we think-- one of the possible explanations for this effect, is a situation in which people are buying a loot box, getting excitement, buying a loot box, getting excitement, buying a loot box, getting that reward, getting that hit, going out into the real world, seeing something that has many of the formal characteristics of the loot box, like a slot machine, and that conditioning transfers over. So therefore, spending money on loot boxes, literally causes people to engage in gambling, leading to problem gambling.⁵⁰

⁴⁹ Daniel L. King and Paul H. Delfabbro, *Predatory monetization schemes in video games (e.g. ‘loot boxes’) and internet gaming disorder*, *Addiction*, 113(11):1967-1969 (November 2018).

⁵⁰ *Id.*

95. Dan Trolaro, the Assistant Executive Director of the Council on Compulsive Gambling of New Jersey, explained, “The mechanics within a loot box look and feel like a gamble. Once minors are exposed to game of chance mechanisms, there is a significantly higher risk that they will have problems with it at a later stage in their lives. The literature indicates that exposure at an early age increases the risk of addiction and the severity of the addiction.”

96. Other experts agree. For example, the Mental Health Director of the UK’s National Health Service summarized their studies by declaring that the gaming industry is “setting kids up for addiction by teaching them to gamble.”

97. According to Keith Whyte, the Executive Director of the National Council On Problem Gambling, “Those who play loot boxes may well be on their way to developing gambling problems due to their loot box play.”

98. According to an April 2021 report from Drs. James Close and Joanne Lloyd, “the evidence also suggests that specific groups might be especially vulnerable to [problem gambling from loot boxes], especially young men.”⁵¹

99. The magnitude of the harm from exposing these particularly vulnerable younger persons to gambling is substantial. Similar to studies on the harm from drinking alcohol at an early age, pre- and early-adolescent-initiation of gambling is associated with increased severity of psychiatric, family/social, and substance abuse problems.⁵²

3. The Published, Quantitative Research Demonstrates Loot Boxes Are Linked to Problem Gambling

100. The amount of scientific research examining loot boxes has exploded in the last five years. Numerous teams of researchers have studied thousands of adults, teenagers, and children in industry-independent, peer-reviewed, independently funded, and published studies.

⁵¹ James Close & Joanne Lloyd, *Lifting the Lid on Loot-Boxes: Chance-Based Purchases in Video Games and the Convergence of Gaming and Gambling*, GambleAware (April 2021), https://www.begambleaware.org/sites/default/files/2021-03/Gaming_and_Gambling_Report_Final.pdf.

⁵² Burge AN, Pietrzak RH, Petry NM, *Pre/early adolescent onset of gambling and psychosocial problems in treatment-seeking pathological gamblers*, J Gambl Stud, 22(3):263-74 (Fall 2006).

101. At least twelve articles have been now published, which report findings of original quantitative research on links between loot boxes and gambling. The scientific conclusions from all twelve peer-reviewed articles are consistent that loot boxes are strongly correlated with clinically significant, severe gambling behavior in both children and adults:

a. Brooks & Clark (2019): Results replicated in two surveys (n=257) that “demonstrate that besides the surface similarity of loot boxes to gambling, loot box engagement is correlated with gambling beliefs and problematic gambling behaviour in adult gamers.”

b. Drummond et al. (2020): Survey of people (n=1,049) from the United States, New Zealand, and Australian showed effects that were “generally clear cut,” “practically significant,” and “highlight the psychological similarity between loot boxes and traditional modes of gambling”—those “with higher gambling symptoms and more risk loot box related engagement spent more on loot boxes than those without” and “participants with greater loot box spending experienced greater negative mood, and more psychological distress.”⁵³

c. Kristiansen & Severin (2020): Analysis of participants (n=1,137) aged 12-16 showed “a significant positive correlation between loot box engagement and problem gambling severity.”⁵⁴

d. Li, Mills, & Nower (2019): Analysis of adult video gamers (n=618) revealed that “loot box purchasing was directly related to higher online gambling frequency, more extended online gambling sessions, and great problem gambling severity.”⁵⁵

⁵³ Drummond A, Sauer JD, Ferguson CJ, Hall LC, *The relationship between problem gambling, excessive gaming, psychological distress and spending on loot boxes in Aotearoa New Zealand, Australia, and the United States-A cross-national survey*, PLoS One, 15(3):e0230378 (Mar. 2020).

⁵⁴ Søren Kristiansen & Majbritt Christine Severin, *Loot box engagement and problem gambling among adolescent gamers: Findings from a national survey*, Addict Behav., 103:106254 (Apr. 2020).

⁵⁵ Wen Li, Devin Mills, Lia Nower, *The relationship of loot box purchases to problem video gaming and problem gambling*, Addictive Behaviors, 97:27-34 (Oct. 2019).

e. Macey & Hamari (2019): International survey of gamers (n=582) with 27% under 18 years old and 31.3% between 18 and 21, revealed “evidence of a strong relationship between loot box opening (paid and unpaid) and gambling.”⁵⁶

f. Zendle & Cairns (2018): Large-scale analysis of gamers (n=7,422) providing “empirical evidence of a relationship between loot box use and problem gambling” that “was neither small, nor trivial”—“It was stronger than previously observed relationships between problem gambling and factors like alcohol abuse, drug use, and depression.” “[T]he strength of the relationship that was observed here...suggests that important gambling-related harm is experienced by users of loot boxes.”⁵⁷

g. Zendle & Cairns (2019): Large-scale analysis of gamers (n=1,172) that “confirm[ed] the size and positive correlation between loot box spending and problem gambling that was previously observed” in Zendle & Cairns (2018). Results suggested “the relationship between problem gambling and loot box spending may be comparable in strength to the relationship between problem gambling and known risk factors in the gambling literature.”⁵⁸

h. Zendle (2020): Large-scale analysis of gamers (n=1,200) that “strongly suggest that paying money for loot boxes is linked to problem gambling” and that this “robust and reliable” evidence base held true “regardless of the presence or absence of specific features of loot boxes, if they are being sold to players for real-world money.”⁵⁹

i. Zendle, Meyer, & Over (2019): Large-scale analysis of 16- to 18-year-olds (n=1,155) provided evidence linking loot box spending and problem gambling in older adolescents

⁵⁶ Joseph Macey & Juho Hamari, *eSports, skins and loot boxes: Participants, practices and problematic behavior associated with emergent forms of gambling*, New Media & Society, 21(1):42-59 (2019).

⁵⁷ David Zendle and Paul Cairns, *Video game loot boxes are linked to problem gambling: Results of a large-scale survey*, PLoS One, 13(11):e0206767 (2018).

⁵⁸ David Zendle and Paul Cairns, *Loot boxes are again linked to problem gambling: Results of a replication study*, PLoS One, 14(3):e0213194 (2019).

⁵⁹ Zendle D, Cairns P, Barnett H, McCall C, *Paying for loot boxes is linked to problem gambling, regardless of specific features like cash-out and pay-to-win*, Computers in Human Behavior, 102:181-91 (2020).

1 with “an order of magnitude larger than relationships between problem gambling and risk factors
2 such as alcohol dependence.”⁶⁰

3 j. von Meduna et al. (2020): Large-scale analysis of loot box purchasers
4 (n=586) demonstrated “the demand for gambling products and demand for loot boxes are closely
5 related” and “[d]ue to their combination of gambling-like elements with a permanent availability
6 and potentially unlimited number of purchases” the “loot box purchasers are at risk of experiencing
7 gambling problems.”⁶¹

8 k. Ide et al. (2021): Analysis of 1,165 adolescent gamers to assess the
9 prevalence and relationship between loot boxes and clinical symptoms of problem online gambling
10 concluded that “the likelihood of problem online gaming was significantly higher for adolescent
11 gamers who purchased loot boxes than for those who did not” and that the “link between loot box
12 purchasing and problem online gaming found in this study is consistent with previous reports in
13 adult populations” (citing Li et al., 2019 and Drummond et al., 2020).⁶²

14 l. González-Cabrera et al. (2022): Large-scale analysis of 6,663 participants
15 using clinical assessment tools “to examine the association between buying loot boxes with IGD
16 [Internet Gaming Disorder] and OGD [Online Gambling Disorder].”⁶³ The study authors reported
17 that their “findings mirror the findings of previous research reporting a positive association between
18 loot boxes and problematic gambling (Brooks & Clark, 2019; Close et al., 2021; Drummond, Sauer,
19 Ferguson, & Hall, 2020; Garea et al., 2021; Kristiansen & Severin, 2020; Macey & Hamari,
20 2019; von Meduna et al., 2020; Wardle & Zendle, 2021; Zendle, 2020; Zendle, Meyer, & Over,
21

22 ⁶⁰ Zendle D, Meyer R, Over H, *Adolescents and loot boxes: links with problem gambling and
23 motivations for purchase*, R Soc Open Sci, 6(6):190049 (2019).

24 ⁶¹ von Meduna M, Steinmetz F, Ante L, Reynolds J, Fiedler, *Loot boxes are gambling-like
25 elements in video games with harmful potential: Results from a large-scale population survey*,
Technology in Society, 63:101395 (Sept. 10, 2020).

26 ⁶² Ide S, Nakanishi M, Yamasaki S, Ikeda K, Ando S, Hiraiwa-Hasegawa M, Kasai K, Nishida
A, *Adolescent problem gaming and loot box purchasing in video games: cross-sectional
27 observational study using population-based cohort data*, JMIR Serious Games, 9(1):e23886 (2021).

28 ⁶³ González-Cabrera J, Basterra-González A, Montiel I, Calvete E, Pontes HM,
Machimbarrena JM, *Loot boxes in Spanish adolescents and young adults: Relationship with internet
gaming disorder and online gambling disorder*, Computers in Human Behavior, 126 (Jan. 2022).

2019, 2020; Zendle & Cairns, 2018, 2019).” This large study demonstrated “a positive and significant relationship was established between the purchase of loot boxes with IGD and OGD.”⁶⁴

102. Drs. Zendle, Meyer and Over (2019) proved the link between loot box buying and problem gambling in a survey of 1,115 adolescents aged 16-18 years. They reported that “loot boxes either cause problem gambling among older adolescents, allow game companies to profit from adolescents with gambling problems for massive monetary rewards, or both.”⁶⁵ The researchers found that problem gambling severity increased with the amount of money spent on loot boxes, that these links were even “stronger than relationships previously observed in adults,” and that the reasons for buying loot boxes were similar to common motivations for engaging in conventional forms of gambling. The researchers concluded that “[w]hen taken together, these results clearly suggest one thing: spending money on loot boxes is linked to problem gambling in older adolescent populations.”

103. Zendle and Cairns (2018) report the findings from their scientific survey of 7,422 gamers aged 18 or older. The researchers measured both how much these gamers spent on loot boxes and the severity of their problem gambling in order to “establish[] both the existence, the size, and the importance of links between purchasing loot boxes and problem gambling.” Drs. Zendle and Cairns found their research “provides empirical evidence of a relationship between loot box use and problem gambling. The relationship seen here was neither small, nor trivial. It was stronger than previously observed relationships between problem gambling and factors like alcohol abuse, drug

⁶⁴ In 2018, the World Health Organization officially characterized “Gaming Disorder” as a mental health disease. “Disordered gaming has also been linked to several negative health-related outcomes and psychosocial detriments, such as increased stress, increased obesity, decreased job performance and/or job loss, decreased academic achievement, sleep abnormalities, relationship problems, depression, lower psychosocial wellbeing, and anxiety.” See Mirna Macur & Halley M. Pontes, *Internet Gaming Disorder in adolescence: investigating profiles and associated risk factors*, BMC Public Health, 21:1547 (Aug. 12, 2021). Compulsive gambling, also called Gambling Disorder, is recognized by the American Psychiatric Association as a type of behavioral addiction. According to the Mayo Clinic, compulsive gambling “is the uncontrollable urge to keep gambling despite the toll it takes on your life.” It “is a serious condition that can destroy lives.” See Mayo Clinic, Compulsive gambling, <https://www.mayoclinic.org/diseases-conditions/compulsive-gambling/symptoms-causes/syc-20355178>.

⁶⁵ Zendle D, Meyer R, Over H, *Adolescents and loot boxes: links with problem gambling and motivations for purchase*, R Soc Open Sci, 6(6):190049 (2019).

1 use, and depression.” The relationship between other types of microtransactions and problem
 2 gambling was not as strong, indicating a specific roll of loot boxes in this association. The
 3 researchers also observed that “[d]ue to the formal features that loot boxes share with other forms
 4 of gambling, they may be acting as a ‘gateway’ to problem gambling amongst gamers.”⁶⁶

5 104. Zendle and Cairns’ 2019 peer-reviewed paper titled “Loot boxes are again linked to
 6 problem gambling: Results of a replication study,” discussed results of a survey that assessed the
 7 replicability of their survey results published in 2018 (discussed in the preceding paragraph). The
 8 2019 paper analyzed the researchers’ large-scale survey of 1,172 gamers aged 18 and older.
 9 Drs. Zendle and Cairns observed “Loot boxes share psychological and structural features with
 10 gambling,” that there was again a “significant link” between problem gambling and loot box
 11 spending, and “the severity of the link seen here suggests that relevant authorities should seriously
 12 consider restricting access to loot boxes as if they were a form of gambling.”⁶⁷

13 105. Brooks and Clark (2019) found that risky loot box use is associated with increased
 14 problem gambling symptoms and gambling related cognitions. Drs. Brooks and Clark studied the
 15 relationships between gaming involvement, engagement with loot boxes, and their associations with
 16 disordered gambling and gambling-related cognitions. In doing so, the researchers conducted two
 17 different surveys: one involving 144 adults and the other of 113 undergraduate students. According
 18 to the authors, the survey results “demonstrate that besides the surface similarity of loot boxes to
 19 gambling, loot box engagement is correlated with gambling beliefs and problematic gaming
 20 behaviour in adult gamers.”⁶⁸

21 106. In their 2019 peer-reviewed paper, Dr. Wen Li and co-authors from the Center for
 22 Gambling Studies at Rutgers University reported direct associations between problem gambling
 23 symptoms and loot box spending, problem gaming symptoms and loot box purchasing, and loot box
 24

25 ⁶⁶ David Zendle and Paul Cairns, *Video game loot boxes are linked to problem gambling: Results of a large-scale survey*, PLoS ONE, 13(11):e0206767 (2018).

26 ⁶⁷ David Zendle and Paul Cairns, *Loot boxes are again linked to problem gambling: Results of a replication study*, PLoS ONE, 14(3):e0213194 (2019).

27 ⁶⁸ Gabriel A. Brooks and Luke Clark, *Associations between loot box use, problematic gaming and gambling, and gambling-related cognitions*, Addictive Behaviors, 96:26-34 (2019).

1 purchasing and psychological distress. The researchers collected data from 618 adult video gamers
 2 via an online survey to explore the relationship between loot box purchases and problem video
 3 gaming and gambling behaviors. Drs. Li et al. observed that “[t]he advent of loot box purchasing in
 4 video games has effectively introduced gambling into the video gaming environment” and
 5 concluded “loot box purchasing was directly related to increased problem video gaming and
 6 problem gambling severity” and “loot box purchases may also be indirectly related to mental distress
 7 due to its association with problem video gaming and problem gambling behavior.”⁶⁹

8 107. Profs. Macey and Hamari (2018), who conducted a survey, found “evidence of a
 9 strong relationship between loot box opening (paid and unpaid) and gambling,” stated that “a real-
 10 world analogue [of loot boxes] are lottery scratch cards.”⁷⁰

11 108. Profs. Kristiansen and Severin (2020) conducted a scientific literature review and
 12 also found the published results to be consistent:

13 Taken together, this research has established that loot box purchasing is associated
 14 with increased scores on gambling severity scales, and that expenditure on loot boxes
 15 is positively correlated with problem gambling severity.⁷¹

16 109. To analyze potential similarities between adults and children in terms of loot box
 17 behavior, Kristiansen and Severin (2020) also conducted a large-scale scientific survey of 5,000
 18 gamers aged 12-16. They did so because “the current knowledge seem to suggest that loot box
 19 engagement catalyze monetary gambling and gambling problems among video gamers” and
 20 “[c]learly, such schemes may pose a risk to young people, who not fully understand the underlying
 21 mechanisms and reward system.” The authors found that loot box use was prevalent among
 22 adolescents, at rates that correspond with studies among adult gamers. Likewise, and corresponding
 23 with the scientific research on adult usage of loot boxes, Kristiansen and Severin (2020)

24 ⁶⁹ Wen Li, Devin Mills, Lia Nower, *The relationship of loot box purchases to problem video*
 25 *gaming and problem gambling*, Addictive Behaviors, 97:27-34 (2019).

26 ⁷⁰ Joseph Macey and Juho Hamari, *eSports, skins and loot boxes: Participants, practices and*
 27 *problematic behavior associated with emergent forms of gambling*, New Media & Society,
 28 21(1):42-59 (2019).

⁷¹ Søren Kristiansen and Majbritt Christine Severin, *Loot box engagement and problem*
gambling among adolescent gamers: Findings from a national survey, Addict Behav., 103:106254
 (Apr. 2020).

1 demonstrated “significant positive correlation between loot box engagement and problem gambling
2 severity.”

3 110. These psychologists, gambling experts, and social science researchers who have
4 studied the issue unanimously agree that loot boxes have all the structural and psychological
5 hallmarks of gambling and correlate with problem gambling, among both children and adults. The
6 proven link to problem gambling is robust and the results have been replicated. Researchers have
7 determined the scientific findings are “very consistent” among published research:

8 111. [T]he findings are very consistent that there is an association between problem
9 gambling and loot box buying among both adolescents and adults (and that the association may be
10 even stronger among adolescents).⁷²

11 **D. Countries Have Banned Loot Boxes for Violating Gambling Laws**

12 112. In recent years, many countries have started to regulate or ban loot boxes. Belgium,
13 the Netherlands and Japan have banned loot boxes because they constitute illegal unregulated
14 gambling. China and other countries regulate loot boxes under national lottery laws. Other countries
15 have opened regulatory investigations of loot boxes. In Australia, a 2018 report concluded loot
16 boxes are “psychologically akin to gambling.” In France, the gambling regulator observed loot
17 boxes undermine public policy on gambling because minors play them and they give rise to habits
18 and reflexes introducing minors to gambling. In the United Kingdom, the House of Lords issued a
19 July 2020 report urging the government to immediately “bring loot boxes within the remit of
20 gambling legislation and regulation.” In November 2020, Spain’s gambling regulator announced it
21 would introduce gaming law amendments to classify loot boxes as a game of chance, and in
22 February 2021, launched an official public consultation into whether loot boxes should be regulated
23 within existing gambling laws, whether a new regulation should be implemented, or if loot boxes
24 should be banned outright. In April 2021, Brazilian authorities launched an inquiry aimed at banning
25 loot boxes. Similarly, lawmakers in Hawaii, Minnesota and Washington introduced state legislation
26 to ban loot boxes in video games.

27 _____
28 ⁷² Mark D. Griffiths, *Loot box buying among adolescent gamers: A cause for concern?*,
Education and Health, 37(3):63-66 (2019).

113. The Government of Belgium examined the use of loot boxes in various video games and determined that they violated that country's gambling laws. In Belgium, as in California, the definition of gambling consists of three core elements: consideration, prizes, and chance.⁷³ The Belgian Gaming Commission found loot boxes contain "all of the constitutive elements of gambling" and stressed that "[i]f there is no adequate intervention, then games of chance in video games will increasingly cause harm to players, families, and society."⁷⁴ Noting the "importance of protecting minors and vulnerable players," the report specifically found the loot box games constituted illegal gambling:

The paid loot boxes in the examined games Overwatch, FIFA 18 and Counter-Strike: Global Offensive fit the description of a game of chance because all of the constitutive elements of gambling are present (game, wager, chance, win/loss).⁷⁵

114. Peter Naessens, Director at the Belgian Commission concluded that the sale of loot boxes must stop:

Paying loot boxes are no innocent component of video games which present themselves as a game of skill. Players are tempted and misled by them and none of the protective measures for games of chance are applied. Now that it has become clear that children and vulnerable persons in particular are being exposed to this without any protection, the game producers, and also the parties involved, are called upon to put a stop to this practice.⁷⁶

115. The Belgian Gaming Commission also determined that given the active participation required to purchase and open loot boxes, "the game element is present both at the video game level as well as at the loot box level."

116. In September 2019, the British Parliament's Digital, Culture, Media and Sport Committee issued a report to Parliament determining that loot boxes constitute gambling and

⁷³ Under Belgian law, it is illegal to operate a game of chance without first obtaining a permit from the Gaming Commission. California's Gambling Control Act contains the same prohibition. *See* Cal. Bus. & Prof. Code §§ 19800, *et seq.*

⁷⁴ Belgian Gaming Commission, *Research Report on Loot Boxes* (April 2008), https://www.gamingcommission.be/opencms/export/sites/default/jhksweb_nl/documents/onderzoekrapport-loot-boxen-Engels-publicatie.pdf.

⁷⁵ "FIFA Soccer" is the title of the current App version of what used to be called "FIFA 18" which is currently available in Defendant's App Store in the United States.

⁷⁶ https://www.gamingcommission.be/opencms/opencms/jhksweb_en/gamingcommission/news/news_0061.html

1 encourage addictive behavior, and recommending that the sale of loot boxes to children should be
 2 banned. Committee Chair Damian Collins MP said:

3 Loot boxes are particularly lucrative for games companies but come at a high cost,
 4 particularly for problem gamblers, while exposing children to potential harm. Buying
 5 a loot box is playing a game of chance and it is high time the gambling laws caught
 6 up. We challenge the Government to explain why loot boxes should be exempt from
 7 the Gambling Act.

8 117. The Children's Commissioner for England issued a report in October 2019 which
 9 called for "urgent legislation [] to address the harm being done to children by loot boxes and similar
 10 products." On January 18, 2020, the Mental Health Director of the UK's National Health Service
 11 issued a statement that loot boxes risk "setting kids up for addiction" and "no company should be
 12 setting kids up for addiction by teaching them to gamble on the content of these loot boxes. No firm
 13 should sell to children loot box games with this element of chance, so yes, those sales should end."⁷⁷
 14 A follow-on report published in July 2020 from the United Kingdom's House of Lords also
 15 recommended immediately "bring[ing] loot boxes within the remit of gambling legislation and
 16 regulation."

17 118. On July 2, 2020, nine months after the UK's Department of Digital, Culture, Media
 18 and Sport concluded that loot boxes should be regulated under the UK's gambling laws, the House
 19 of Lords called for the immediate regulation of loot boxes as gambling: "While we welcome the
 20 government's intention to consider the relationship between gambling and video gaming, we believe
 21 that this issue requires more urgent attention." The House of Lords' report noted the "evidence we
 22 have heard has stressed the urgency of taking action." Accordingly, the House of Lords "echo the
 23 conclusion of the [UK's] Children's Commissioner's report, that if a product looks like gambling
 24 and feels like gambling, it should be regulated as gambling" and therefore recommended that loot
 25 boxes be immediately deemed gambling.

27 ⁷⁷ NHS England, *Country's top mental health nurse warns video games pushing young people*
 28 *into 'under the radar' gambling* (Jan. 18, 2020), <https://www.england.nhs.uk/2020/01/countrys-top-mental-health-nurse-warns-video-games-pushing-young-people-into-under-the-radar-gambling/>.

119. Government officials in the Netherlands studied loot boxes in ten popular games. In its April 2018 report, the Netherlands Gaming Authority determined some loot boxes had gambling elements similar to slot machines with addiction potential similar to blackjack, roulette and other casino gambling games. According to the official report, “all of the loot boxes that were studied could be addictive,” “loot boxes have a moderate to high addiction risk potential,” “have integral elements that are similar to slot machines” where “multiple visual and sound effects are added and a ‘near miss’ effect is used,” and “as a result of opening loot boxes, socially vulnerable groups such as young people could eventually be encouraged to play other games of chance.” Noting that all the loot boxes could “foster the development of addiction,” the report from the Netherlands Gaming Authority also observed online gamers attribute significant social status value on themselves and other gamers based on the prizes they win from playing loot boxes.⁷⁸

120. Australian officials also determined the loot box mechanism constitutes a form of gambling that targets minors and otherwise acts “as a gateway to problem gambling and associated harm later in life.” Accordingly, the March 2020 report prepared by the Australian House of Representatives Standing Committee on Social Policy and Legal recommended mandatory age verification for loot box purchasing:

Given their resemblance to gambling, the Committee considers that loot boxes and other simulated gambling elements in video games should be subject to appropriate age restrictions, including through the use of mandatory age verification.⁷⁹

121. The March 2020 Australian report was preceded by an October 2019 report from the Australian Gambling Research Centre finding “the use of ‘loot boxes’ or micro-transactions for chance-based items in online video games [is] a form of gambling that is readily accessible to players under the age of 18 years.” This 2019 Australian report also found the presence of loot boxes in video games “normalizes gambling”:

⁷⁸ Netherlands Gaming Authority (Kansspelautoriteit), *Study into loot boxes: A treasure or a burden?* (Apr. 10, 2018), <https://kansspelautoriteit.nl/english/loot-boxes/>.

⁷⁹ Parliament of the Commonwealth of Australia, House of Representatives Standing Committee on Social Policy and Legal Affairs, *Protecting the age of innocence: Report of the inquiry into age verification for online wagering and online pornography* (Feb. 2020), https://parlinfo.aph.gov.au/parlInfo/download/committees/reportrep/024436/toc_pdf/Protectingtheageofinnocence.pdf.

1 The use of for-money, in-game ‘loot boxes’ as a mechanism through which additional
 2 in-game items can be obtained familiarises players, many of whom are less than 18
 3 years of age, with a gambling activity that is practically identical to games available
 4 on external sites. It coexists there with lotteries, eSports betting and other more
 5 explicit gambling activities played in virtual currency. This process of
 6 ‘gamblification’ can be seen as analogous to that occurring in the context of sports
 betting, whereby gambling practices are becoming increasingly normalised as an
 inherent component of sports engagement (Jenkinson, de Lacy-Vawdon, & Carroll,
 2018; Lopez-Gonzalez & Griffiths, 2016).⁸⁰

7 122. Here in the United States, the Federal Trade Commission recently hosted a workshop
 8 on loot boxes. Meanwhile, U.S. Senators Maggie Hassan (D-NH)), and Josh Hawley (R-MO)
 9 introduced a bi-partisan bill co-sponsored by Ed Markey (D-MA) and Richard Blumenthal (D-CT)
 10 titled “The Protecting Children From Abusive Games Act” that will prohibit loot boxes in minor-
 11 oriented games. The proposed bill includes a prohibition in minor-oriented games of loot boxes,
 12 which it defines as “an add-on transaction to an interactive digital entertainment product that in a
 13 randomized or partially randomized fashion unlocks a feature of the product or adds to or enhances
 14 the entertainment value of the product[.]”

15 123. Religious leaders recently publicly denounced the loot box predatory sales scheme
 16 and called for elimination of the predatory sales mechanics game developers use to foster and profit
 17 from addiction and human vulnerabilities and fuel gambling-related harms. On October 14, 2021,
 18 the Malaysian Federal Territories Mufti’s Office released a statement calling out loot boxes for
 19 being gambling and thus haram or prohibited in Islam. According to the statement, “The law on the
 20 process of buying items by opening crates (lootboxes) using UC (in-game) money bought with [real-
 21 world] money is illegal because it has an element of gambling that is prohibited in religion (Islam)
 22 because it has a zero-sum game element; that is, it depends on luck alone. In addition, it denies the
 23 buyer the right to buy what is desired.”⁸¹ In May 2021, the Church of England Ethical Investment

24
 25 ⁸⁰ Uma Jatkar and Rebecca Jenkinson, *House of Representatives Standing Committee on Social
 26 Policy and Legal Affairs: Submission to the Inquiry into Age Verification for Online Wagering and
 Online Pornography*, Australian Gambling Research Center, Australian Institute of Family Studies
 (Oct. 25, 2019).

27 ⁸¹ Alex Daud Briggs, *Malaysian Mufti Declares that Loot Boxes are Haram!*, GamerBraves
 28 (October 14, 2021), available at <https://www.gamerbraves.com/malaysian-mufti-declares-that-loot-boxes-are-haram/>.

Advisory Group (“EIAG”) published policies on “ethical investing” in companies profiting off loot boxes and other gambling activities. For the Church of England, “[a]t an ethical level, [] gambling [is] an industry of particular concern, since it is so naturally geared to exploiting vulnerabilities.” Describing loot boxes as “in-game purchases akin to gambling, where psychological cues with addictive techniques may be employed,” the EIAG, which provides ethical investment advice to the Church of England, advocated for “protections for children or those vulnerable to gambling-related harms” including “[r]estriction on children’s ability to play games that feature loot boxes” and “a user spending limit and time restrictions on usage.”⁸² The EIAG policy was published following the condemnation of loot boxes from Dr. Alan Smith, the Bishop of St Albans and main spokesman on gambling for the Church of England. According to Dr. Smith, “It is not simply my opinion that loot boxes function as gambling in everything but name; the Belgian Parliament has outlawed them because of its worries.”⁸³

E. The Hague’s October 2020 Ruling That Loot Boxes Are Illegal Gambling

124. In October 2020, an appellate panel at the Court of The Hague determined that loot boxes are unlicensed games of chance that violate gambling laws.⁸⁴ The gambling law at issue had the same core elements as the ones here: consideration, prize, and chance. Whether loot boxes are a game of chance separable from the associated games that included elements of player skill was also debated.

⁸² The Church of England Ethical Investment Advisory Group, *Gambling: The Policy of the Church of England National Investing Bodies and The Advice of the Church of England Ethical Investment Advisory Group* (May 2021), <https://www.churchofengland.org/sites/default/files/2021-05/Gambling%20-%20web.pdf>.

⁸³ The Church of England in Parliament, *Bishop of St Albans – ban online gambling adverts and monitor game sto reduce harm to young people* (Jan. 17, 2019), <https://churchinparliament.org/2019/01/17/bishop-of-st-albans-ban-online-gambling-adverts-and-monitor-games-to-reduce-harm-to-young-people/>

⁸⁴ See World Today News, *Court: Packs in FIFA are gambling games and EA must adapt game in in the Netherlands* (Oct. 29, 2020), <https://www.world-today-news.com/court-packs-in-fifa-are-gambling-games-and-ea-must-adapt-game-in-the-netherlands-gaming-news/>; <https://uitspraken.rechtspraak.nl/inziendocument?id=ECLI:NL:RBDHA:2020:10428&showbutton=true&keyword=gokken> (link to official Hague opinion, last visited Mar. 10, 2021).

125. The three-judge panel at The Hague affirmed a conclusion by the Dutch Gaming Authority that Ultimate Team Pack loot boxes in EA's FIFA video games are an unlicensed, illegal gambling game of chance completely separate from FIFA's game of skill.⁸⁵ Citing the need for transparency and to warn consumers about the misconduct, The Hague also rejected the game developer's objections to making the opinion public.

126. Grounded in expert testimony, The Hague concluded it has been established "that there is evidence of a correlation between (buying) loot boxes and gambling problems," and therefore loot boxes present a "high risk potential" for gambling addiction.

127. The Hague also opined that it is particularly problematic that loot boxes expose vulnerable children to the addictive gambling games:

[E]xperts consider it very plausible that there is a risk that, in particular, underage participants may become more sensitive to addiction as a result of [loot boxes]. Minors are vulnerable and more easily addicted; if they gamble at a minor age they are at greater risk of becoming addicted. In FIFA, minors have access to [loot boxes]. When playing FIFA, they can unintentionally and unprotected come into contact with a game of chance. Experts warn against loot boxes, individual reports have been received from the defendant about loot boxes, including those from plaintiffs, about their addictive effects, and media reports from participants have appeared.

128. Citing public policies about preventing gambling addiction, particularly in minors—similar to public policies at issue here—The Hague panel held banning loot boxes and imposing fines for their continued use was "necessary, appropriate and proportional" and that any "commercial interests do not outweigh the public interests at stake." In particular, the panel cited "[t]he public interests of the prevention of gambling addiction, in particular among minors, the protection of the consumer and the prevention of crime and illegality, [which] can be regarded as legitimate objectives." These public interests in enforcing the loot box ban were "so great" that it was not unreasonable to require the game developer to cease and desist within three weeks.

⁸⁵ There is nothing about The Hague's ultimate findings that is unique to the structure of the loot boxes in FIFA. The opinion observes similar actions taken involving other loot boxes: "[f]our providers of illegal loot boxes have been contacted and several providers have adjusted their offerings."

129. The Hague also rejected the argument by the FIFA game developer that although its Ultimate Team Pack loot boxes were not games of chance, they were inseparable from the FIFA video game in which they were found. The developer contended that since FIFA was a game of skill, the loot box must be treated as one as well. The Hague rejected the argument because loot boxes can be bought separately and opened separately from the FIFA game being played and the goods obtained from loot boxes are separate from the matches. Therefore, loot boxes must be regarded and assessed on their own. There is nothing unique about the loot boxes in FIFA that properly render them—but not other loot boxes—a separate, standalone game of chance. As with FIFA, the loot boxes in Brawl Stars and Clash Royale can be bought and opened separate from playing the associated game.

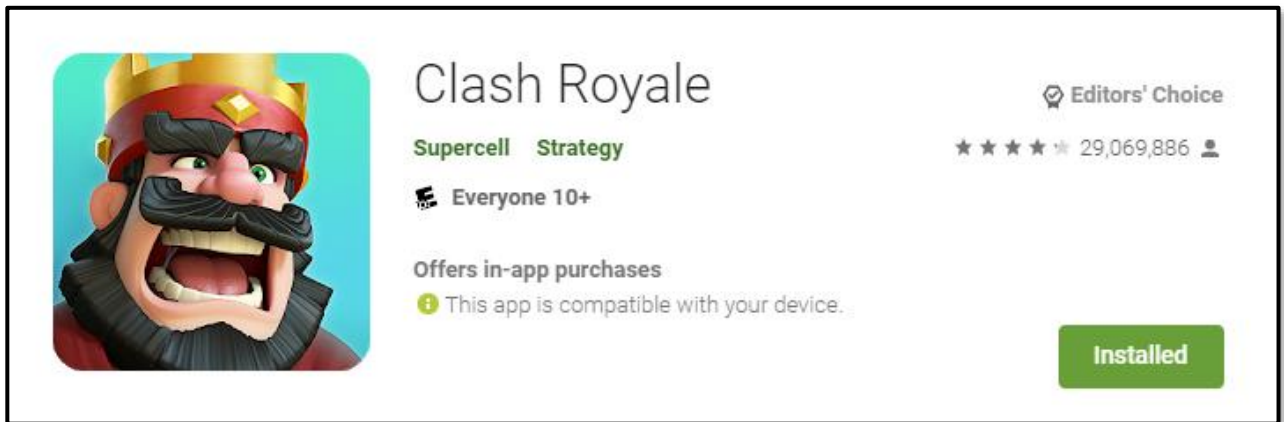
F. Clash Royale and Brawl Stars are Age-Rated for Children as Young as 9 Years Old, But Do Not Disclose Gambling or the Loot Box Mechanism

130. Video game content rating systems are used by video game developers and platform providers (such as Apple and Google) to classify individual games into suitability-related groups organized by age ranges based on the game's content relating to substances (alcohol, tobacco, or drugs), blood and gore, violence, mature and crude humor, profane language, depictions of nudity, real or simulated gambling, and sexual content or themes. One of the primary reasons for these ratings is to inform consumers, especially parents, of potentially objectionable content within a game.

131. In the United States, much of the video game industry “self-regulates” through the Entertainment Software Ratings Board (“ESRB”). ESRB ratings are based on a content rating questionnaire completed by the game developer. Developers, including Supercell, have the ability to appeal the rating assigned by ESRB. According to the ESRB, age ratings are provided so parents can choose age-appropriate games for their children:

ESRB ratings provide information about what's in a game or app so parents and consumers can make informed choices about which games are right for their family. Ratings have 3 parts: Rating Categories, Content Descriptors, and Interactive Elements.

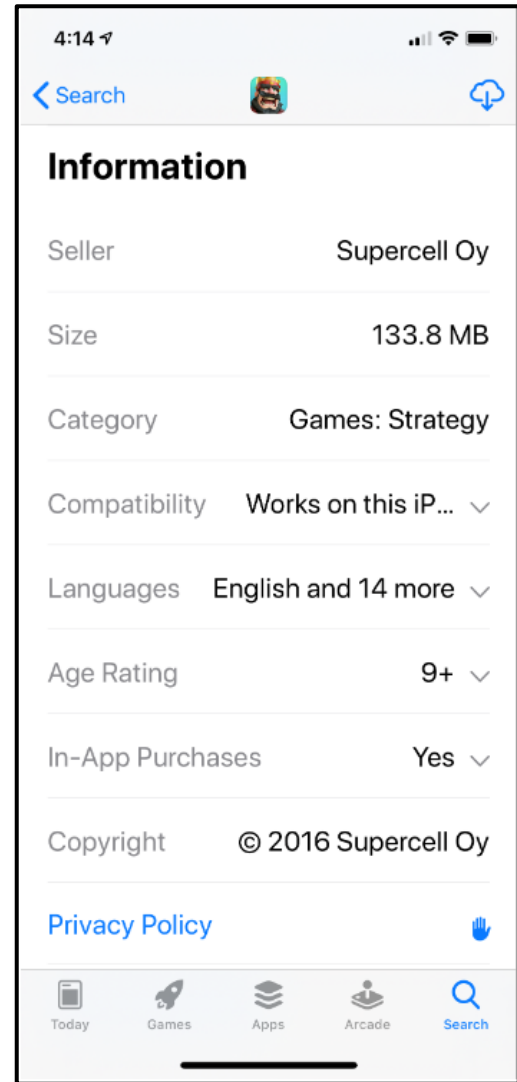
132. Since 2015, Google has provided ESRB-based age-ratings for games available to download in its Google Play store. Notably, Google's ratings do *not* contain any disclosures concerning the use of Loot boxes or gambling. Instead, the only disclosure available is the vague and generic statement that a game "Offers in-app purchases." As an example, below is a screen shot of Google Play's disclosures concerning Clash Royale⁸⁶:



133. Apple does not ascribe to the ESRB ratings system. Instead, Apple has created its own ratings categories for games available to download in its App Store. The Apple App Store age ratings are set by the game developer.⁸⁷ Apple's ratings also do not contain any disclosures concerning gambling or the use of loot boxes. Instead, the only disclosure (seen only when scrolling down within the App download screen) is the vague and generic statement a game has "In-App Purchases." If the developer age rates its game "9+" or lower it can be included in the Kids category of gaming apps in the App Store. As an example, below is a screen shot of the App Store's disclosures concerning Clash Royale:

⁸⁶ https://play.google.com/store/apps/details?id=com.supercell.clashroyale&hl=en_US

⁸⁷ <https://help.apple.com/app-store-connect/#/dev599d50efb> (Apple's webpage states the developer is "required to set an age rating for your app.").



134. Within its “Parent’s Guide” on Supercell’s website, Supercell states “[t]hings like age limits, in-app purchases, and privacy are all very valid concerns” and “before you or your child download our games, you should be given upfront information about the game’s content.” While on its website, Supercell states users of its game should be at least 13 years of age, Supercell is responsible for the lower Apple and Google age ratings for its games and/or has failed to ensure Apple and Google set higher age ratings for Clash Royale and Brawl Stars. Supercell’s age rating and Parents Guide do not contain any disclosures concerning in-game gambling or the use of loot boxes.⁸⁸

⁸⁸ <https://supercell.com/en/parents/>

135. Thus, there is no notice—and no requirement of any notice by Supercell, Apple or Google—to the parent and/or gamer that a game contains loot box gambling mechanisms.

G. Loot Boxes Constitute Gambling in Violation of California Law

136. Loot boxes are games of chance offering things of value and constitute a form of gambling in violation of California Penal Code section 330a, 330b and 330.1. Further, through its significant involvement in “exposing [loot boxes] for play,” and also receiving a “share of the revenue” from these unlicensed games of chance, Supercell is conducting a gambling operation in violation of California’s Gambling Control Act (Bus. & Prof. Code §§ 19800, *et seq.*) and violating Penal Code section 337j.

1. Violations of California’s Gambling Device Statutes: Penal Code §§ 330a, 330b and 330.1

137. Under California law, Supercell’s loot boxes when played on a mobile phone, tablet, or other similar device constitute illegal “slot machines or devices.” California Penal Code § 330b(d) broadly defines an unlawful “slot machine or device” as:

a machine, apparatus, or device that is adapted, or may readily be converted, for use in a way that, as a result of the insertion of any piece of money or coin or other object, or by any other means, the machine or device is caused to operate or may be operated, and by reason of any element of hazard or chance or of other outcome of operation unpredictable by him or her, the user may receive or become entitled to receive any piece of money, credit, allowance, or thing of value, or additional chance or right to use the slot machine or device, or any check, slug, token, or memorandum, whether of value or otherwise, which may be exchanged for any money, credit, allowance, or thing of value, or which may be given in trade, irrespective of whether it may, apart from any element of hazard or chance or unpredictable outcome of operation, also sell, deliver, or present some merchandise, indication of weight, entertainment, or other thing of value.

138. The California Bureau of Gambling Control describes the section 330a, 330b, and 330.1 gambling devices statutes as “broad in their coverage” and provides that an “illegal gambling device” generally has three features:

California’s gambling device statutes are broad in their coverage and prohibit any person from owning, renting, or possessing illegal gambling devices. (Penal Code, §§ 330a, 330b, 330.1.) An illegal gambling device has three features:

1. It is a machine, apparatus, or device (coin operation is not required);
2. Something of value is given to play the device; and
3. The player has the opportunity to receive something of value by any element of hazard or chance ("something of value" is not limited to coins, bills, or tokens—it also includes free replays, additional playing time, redemption tickets, gift cards, game credits, or anything else with a value, monetary or otherwise.) (Penal Code, §§ 330a, 330b & 330.1.)

In addition, if a device can readily be converted to have the three features of an illegal gambling device, (as listed in 1, 2, and 3 above), it is an illegal gambling device. (Penal Code, § 330b(d)).⁸⁹

139. The loot boxes at issue meet this definition. First, in furtherance of Supercell's agreement with Apple and Google, a player uses his or her Apple or Android mobile device to download Supercell's game apps that offer loot boxes, thereby converting the mobile device into a device on which to play a loot box. Pursuant to Supercell's design, Supercell's games cannot be played, and loot boxes cannot be purchased, unless and until the games are downloaded onto an Apple or Google device. Second, something of value is used to purchase a play on a loot box, either when the player purchases the loot box directly with real-world money, when the player purchases virtual currency with real-world money to buy chances on loot boxes, or when virtual currency, which is property, is used. By agreement, Supercell shares the revenue from these purchases with Apple and Google on a 70/30 split. Third, the loot box offers the player a randomized chance to obtain something valuable.

140. The potential prizes are "things of value," both to the players who spend to win rare prizes and otherwise. California law broadly defines the types of prizes that come within its gambling prohibitions. Any "thing of value," regardless of whether it is capable of being turned into money, is sufficient. Here, people are willing to spend money to try to win these digital goods, whether they are cosmetic, improve gameplay or award valuable in-game currency. By its very nature, the purpose of purchasing and opening a loot box is to win something of value. A chance to

⁸⁹ Bureau of Gambling Control, Law Enforcement Advisory: Illegal Gambling Devices (Nov. 1, 2010), <https://www.abc.ca.gov/wp-content/uploads/2019/06/Law-Enforcement-Advisory-Illegal-Gambling-Devices-1.pdf>.

1 win a thing of value is the *sine qua non* of selling loot boxes. Supercell is aware of this. In the games
 2 at issue, Supercell describes potential winnings as common, rare, epic, and legendary. Supercell also
 3 admits its loot boxes provide the chance to hit the big time by winning valuable items. For instance,
 4 on its website, Supercell describes the loot boxes as offering the random chance to “unlock
 5 rewards”⁹⁰ and states these in-game purchases “can be used to enhance certain gameplay
 6 elements.”⁹¹

7 141. Professor Robert Woodruff explains value in a widely cited published paper: “a
 8 customer perceived preference for and evaluation of those products attributes, attribute
 9 performances, and consequences arising from use that facilitate (or block) achieving the customer’s
 10 goals and purposes in use situations.”⁹² This widely adopted definition is based on the fact that value
 11 comes from a customer’s preferences, evaluations and perceptions. Because the perceived value of
 12 an item is rationally greater than the cost of obtaining that item, loot boxes are economically valued
 13 at no less than the cost to obtain them.

14 142. The value of a loot box’s virtual items is derivative of the same factors dictating the
 15 value of tangible items. Research demonstrates that “[i]n general, [] virtual items are valued for
 16 many of the same reasons as more tangible commodities.” Nevertheless, because “the symbolic
 17 value of a virtual good stems from its role and meaning inside the game...A person not part of that
 18 social world would probably not see the good as valuable at all.”⁹³ There would be no incentive to
 19 acquire or offer loot box items, including cosmetics if they did not have some sort of value to the
 20 player.

21 143. Analyzing whether loot boxes provided the random chance opportunity to win things
 22 of value, the Belgian Gaming Commission—analyzing a broad definition comparable to
 23 California’s—answered this question with a resounding yes:

24
 25 ⁹⁰ <https://clashroyale.com/blog/news/about-the-game>

26 ⁹¹ <https://supercell.com/en/parents/>

27 ⁹² Robert B. Woodruff, *Customer value: the next source for competitive advantage*, J of the
 Acad Mark Sci, 25(2):139-153 (1997).

28 ⁹³ Vili Lehdonvirta, *Virtual item sales as a revenue model: identifying attributes that drive
 purchase decisions*, Electron Commer Res, 9:97-113 (2009).

[I]t is not important if a 'skin' in Overwatch, FIFA 18 or C-S: GO is merely of aesthetic value. What is important is that players attach value to it and that this value is also emphasized by the game developers themselves. Sometimes colour or numeric codes are used to assign value to items. The items are also often assigned value by creating scarcity. By offering certain items in loot boxes during a certain time frame, players will be inclined to buy more loot boxes during that specific period (event) because this is the only chance to obtain this 'valuable' item.⁹⁴

144. Economic theory holds that market price is the best indicator of value. Evidence of the real-world value of the randomized loot box items includes that where these virtual items are tradeable for money, transactions of fiat currency occur. Further, most virtual items are sold for less than the cost of a loot box (representing real financial loss), so most of the time a player who opens a loot box loses. Gamers who purchase virtual items also spend significantly more in total on games, demonstrating a willingness to spend additional money to acquire virtual items and the additional financial value of these items over and above the game itself.⁹⁵ Likewise, because the potential loot box prizes are categorized by frequency and rarity, value is inherently assigned to them. The collection of rare items also is seen as a sign of status within the gaming community, thus ascribing a form of social value to the items.⁹⁶ With loot boxes and the general economy, much consumer spending occurs to obtain or maintain social status.

145. According to Professor Leon Xiao from Queen Mary University of London, School of Law, even though players often receive undesirable items in loot boxes, they continue to purchase

⁹⁴ Belgian Gaming Commission, *Research Report on Loot Boxes* (April 2018).

⁹⁵ Drummond A, Sauer JD, Hall LC, Zendle D, Loudon MR, *Why loot boxes could be regulated as gambling*, Nat Hum Behav, 4(10):986-988 (Oct. 2020). Drummond and co-authors analyzed sales of 2,319 virtual items from three popular games. In the aggregate, sales of the virtual items exceeded one billion dollars, with the individual items being sold for between \$0.03 and \$743.80 each. "Contradicting the common argument that loot boxes are not gambling because no player loses upon opening a loot box" the "overwhelming majority of players incur financial losses when on-selling loot box items, with ~93% of sales recouping less than the purchase price."

⁹⁶ For instance, Dr. Vili Lehdonvirta, an economic sociologist, professor at the University of Oxford and former game developer, points out that in the game *Ultima Online*, "one of the most highly valued virtual items in the whole system was a small brown lump named 'horse dung'. Despite its very modest appearance and complete lack of performance or functionality, people have paid the equivalent of hundreds of U.S. dollars for the item." Vili Lehdonvirta, *Virtual item sales as a revenue model: identifying attributes that drive purchase decisions*, Electron Commer Res, 9:97-113 (2009).

loot boxes for the opportunity to win rare items, functionally advantageous items, and other things of value:

Players often receive rewards that they do not value as being worth the cost of purchasing the loot box, such as duplicate items, subjectively less attractive cosmetic items or objectively less powerful items. However, players knowingly continue to purchase loot boxes because they want to obtain the valuable rarer items in order to complete their collection; to increase their in-game power either to gain a competitive advantage over other players in multiplayer games or to reduce the game's difficulty in single-player games; or even to make a profit by selling valuable rarer items to other players.⁹⁷

146. Professors from the Department of Psychology at the University of Waterloo examined whether “players do indeed find rarer [loot box] items as being subjectively more valuable.”⁹⁸ To do so, Professors Larche et al. (2019) conducted two experiments to observe whether “loot box rewards are treated in much the same way that monetary outcomes are treated in slots play” and therefore “underscore that both reward structure may lead to similar rewards processing and motivational effects.”

147. Results from Experiment 1 showed that “players systematically categorized valuable and non-valuable loots based on increasing rarity, and hence increasing objective value, of the items in a loot box”:

Players subjectively value most those loot boxes with the highest objective worth (e.g., those that contains at least one of the most uncommon ‘legendary’ items) compared to loots that were objectively worth less (e.g., those containing more common items falling into the ‘rare’ and ‘epic’ tiers). Moreover, players also gave larger ratings of arousal, valence and urge as the reward value of the loot box increased.

148. In Experiment 2, Professors Larche et al. sought to replicate the results of Experiment 1, and to also analyze if common loot box items produce higher ratings of

⁹⁷ Leon Y. Xiao, *Which implementations of loot boxes constitute gambling? A UK legal perspective on the potential harms of random reward mechanisms*, Intl J Ment Health Addiction, DOI: 10.1007/s11469-020-00372-3 (Aug. 24, 2020).

⁹⁸ Larche CJ, Chini K, Lee C, Dixon MJ, Fernandes M, *Rare Loot Box Rewards Trigger Larger Arousal and Reward Responses, and Greater Urge to Open More Loot Boxes*, J Gambl Stud, 37(1):141-163 (Mar. 2021).

disappointment and whether prominent measures of hedonic reward and arousal were associated with the levels of loot. The researchers stated, “Experiment 2 successfully replicated the results for these subjective measures, in addition to supplying converging evidence of the arousing, hedonically rewarding and motivating nature of these non-monetary rewards with PRPs [or “post reinforcement pauses”—an index of reward reactivity that is longer following wins], SCRs [or “skin conductance responses”—measuring sweat gland activity, a well-established indicator of physiological arousal], and force measures.” The researchers found that “[s]imilar to the indisputable, rewarding feeling of winning money, we show that obtaining in-game items within a loot box appear to activate the same reward response in a slot machine” and that “such findings are indicative of players’ awareness and sensitivity to the value of different loots.”

149. Professors Drummond, Sauer, Hall, Zendle and Loudon specifically analyzed whether the virtual items that may be won from randomized loot boxes have monetary value. In their 2020 paper published in the top-tier journal *Nature*, Drummond et al. determined that loot boxes have value using numerous economic theories.⁹⁹ The authors concluded:

We have demonstrated that virtual items have monetary value to gamers irrespective of whether they can be cashed out. Therefore, randomised virtual items (loot boxes) purchased for real money likely satisfy the requirements of value needed to meet the legal definitions of gambling in many jurisdictions.¹⁰⁰

150. Similarly, Zendle et al. (2020), analyzed 1,200 gamers and determined that the presence of a cash out mechanism is also not a uniquely strong gateway to the robust relationship between loot box spending and problem gambling.¹⁰¹ Indeed, Zendle (2020) concluded there was “robust and reliable” evidence linking loot boxes to problem gambling “regardless of whether or

⁹⁹ Drummond A, Sauer JD, Hall LC, Zendle D, Loudon MR, *Why loot boxes could be regulated as gambling*, Nat Hum Behav, 4(10):986-988 (Oct. 2020).

¹⁰⁰ The presence of a cash out mechanism is also not a uniquely strong gateway to the robust relationship between loot box spending and problem gambling. Zendle D, Cairns P, Barnett H, McCall C, *Paying for loot boxes is linked to problem gambling, regardless of specific features like cash-out and pay-to-win*, Computers in Human Behavior, 102:181-191 (Jan. 2020). From a gambling definitional perspective, The Hague appellate panel also noted that it is “irrelevant whether prizes can be converted into real money.”

¹⁰¹ Zendle D, Cairns P, Barnett H, McCall C, *Paying for loot boxes is linked to problem gambling, regardless of specific features like cash-out and pay-to-win*, Computers in Human Behavior, 102:181-191 (Jan. 2020).

not loot boxes gave players gameplay advantages, allowed them to trade items for real world money, allowed them to cash-out, or showed near-misses.” From a gambling definitional perspective, The Hague appellate panel also noted that it is “irrelevant whether prizes can be converted into real money.”

151. Even loot box transactions that do not permit cashing-out winnings should be recognized for what they are: a traditional gamble between the purchasing player and the game company (Xiao 2020):

The player is risking losing money (when they obtain worthless in-game items) for a chance to obtain rare and valuable items at very little cost, whilst the company is risking having to immediately provide the player with rare and valuable items at an undervalue, and losing out on additional potential sales, for a chance to instead provide the player with worthless in-game items even though they have paid money.¹⁰²

152. While monetization is not a requirement for an item (tangible or not) to provide value, there are many ways to monetize the prizes won from loot boxes, thereby demonstrating that these prizes are “things of value.”

153. Rockloff et al. (2020) examined the best-selling video games by revenue, including Supercell’s Clash Royale, and reported that of games with loot boxes, 84% (43 of 51) “allowed the skins or other items to be sold for cash or traded for other items with a monetary value (e.g., other skins, in-game currency, etc.).”¹⁰³ Among the games analyzed by Prof. Rockloff et al. was Supercell’s Clash Royale. The researchers observed that not only can Clash Royale loot boxes be purchased using the purchasable in-game gem currency or directly purchased with real money via a pack, but the loot boxes in Clash Royale randomly contain “items of value” that are “tradeable for [] other items of value” and “can be used to purchase [] other items of value.” Supercell’s Brawl Stars loot boxes also have these very same monetization and value features.

¹⁰² Leon Y. Xiao, *Which implementations of loot boxes constitute gambling? A UK legal perspective on the potential harms of random reward mechanisms*, Intl J Ment Health Addiction, DOI: 10.1007/s11469-020-00372-3 (Aug. 24, 2020).

¹⁰³ Rockloff M, Russell AMT, Greer MN, Lolé L, Hing N, Browne M, *Loot boxes: Are they grooming youth for gambling?*, NSW Responsible Gambling Fund (2020).

154. Because some of these specific high-demand items in the game can be so difficult (and costly) to obtain, a “gray market” has sprung up on the internet—websites where the game accounts can be (and are) bought and sold for real money outside of the game itself. Numerous websites have been created to broker these transactions, bringing buyer and seller together to sell these accounts, for money outside of the game.¹⁰⁴ In fact, there are companies who specialize in buying and selling video game accounts that contain prizes from loot boxes. The value, or price, of each game account is determined by the “loot” the player possesses which is “locked” in their account. As Professor Rockloff explained, this practice “allows a conversion of highly valued loot box prizes into cash.”¹⁰⁵ According to Professor Drummond, the emergence of these markets “suggests that the items themselves have intrinsic worth and this value is simply indexed by price where markets are available.”¹⁰⁶

155. The randomized loot box items have even become a way for criminals to launder money. Moiseinko and Izenman (2019), research fellows at the world’s oldest and a major UK defense and security think tank, reported because “[i]n-game artefacts and currencies have real-life value,” criminals use stolen bank cards to buy in-game virtual currency and then sell associated game accounts for discounted prices online. In fact, “a cyber-criminal group had automated the use of stolen card details to create a large number of Apple IDs, bought in-game items in mobile games such as *Clash of Clans* or *Marvel Contest of Champions*, and resold them on third-party websites for fiat currency.” According to the researchers, 80 gems from Clash Royale have an exchange rate of \$1 on a number of online exchanges.¹⁰⁷

¹⁰⁴ For example, Brawl Star accounts are available to purchase at playerauctions.com. The auction house allows gamers to buy and sell accounts that are priced depending on the Brawlers they contain. On October 12, 2021, an account with 48 Brawlers was available to purchase for \$359.99.

¹⁰⁵ Rockloff M, Russell AMT, Greer MN, Lolé L, Hing N, Browne M, *Loot boxes: Are they grooming youth for gambling?*, NSW Responsible Gambling Fund (2020).

¹⁰⁶ Drummond A, Sauer JD, Hall LC, Zendle D, Loudon MR, *Why loot boxes could be regulated as gambling*, Nat Hum Behav, 4(10):986-988 (Oct. 2020).

¹⁰⁷ Anton Moiseinko and Kayla Izenman, *Gaming the system: money laundering through online games*, Royal United Services Institute, <https://rusi.org/explore-our-research/publications/rusi-newsbrief/gaming-system-money-laundering-through-online-games> (Oct. 11, 2019).

156. While loot box prizes can be monetized in a variety of ways, Professor Elizabeth Handsley explained why that overly narrow conceptualization of 'value' ignores psychological processes and is ultimately "neither here nor there" when it comes to valuing loot box prizes:

[The ability to]...convert loot boxes into real-life money is neither here nor there because the items that are accessed via loot boxes are of value to the player. That's all that really matters from a psychological perspective. Whether that person can then get money or some real-life tangible good in return for the loot boxes is neither here nor there. The player is committed to the game. These games are very absorbing. There are a lot of people who have a lot invested in playing games and getting to higher levels, therefore the value to those can be very high. From a psychological perspective, that's what matters. Whether it's money or some tangible good is really not the point.¹⁰⁸

157. Whether the potential loot box items make playing the game easier and more winnable ("functional" items) or allow players to customize the look of their in-game characters ("cosmetic" items), all loot boxes provide a completely randomized chance to win valuable prizes.

158. For example, Hamari et al. (2017) found the value of in-game items that may be obtained to "personalize" video game characters: "One prominent value proposition of a lot of in-game content is that it affords players to differentiate themselves from other players by personalizing their avatar or other belonging in-game."¹⁰⁹

159. Lehdonvirta (2009) also observed that both functional and cosmetic attributes of virtual goods drive consumers' purchase decisions. "It could even be speculated that in some cases the functional attributes of a virtual good serve only as an excuse for a purchase that is primarily motivated by hedonic or social aspects, a technique commonly applied in marketing high-performance automobiles."¹¹⁰

¹⁰⁸ Commonwealth of Australia, The Senate, *Environment and Communications References Committee: Gaming micro-transactions for chance-based items*, at p.29 (Nov. 2018).

¹⁰⁹ Hamari J, Alha K, Järvelä S, Kivikangas JM, Koivisto J, & Paavilainen J, *Why do players buy in-game content? An empirical study on concrete purchase motivations*, *Computers in Human Behavior*, 68:538-546 (2017).

¹¹⁰ Vili Lehdonvirta, *Virtual item sales as a revenue model: identifying attributes that drive purchase decisions*, *Electron Commer Res*, 9:97-113 (2009).

160. On October 22, 2019, the Children's Commissioner for England published a report titled "Gaming the System."¹¹¹ The report examined gaming experiences as seen through the eyes of children aged 10 to 16. While children reported that games provide positive, fun experiences, they also reported negative aspects to playing games online. Of particular relevance here, children report being "scorned in games [] if they are seen to wear the 'default skin' (the free avatar they receive at the start of the game). Children say they feel embarrassed if they cannot afford new 'skins', because then their friends see them as poor." Nina, a 10-year-old, told the researchers "If you're a default skin, people think you're trash." The Children's Commissioner explained how even though some children describe loot boxes as gambling, they nonetheless purchase loot boxes because of peer pressure, spend unplanned money to try to "chase losses" after losing money from loot boxes, and because "[i]n general, children do not have effective strategies to manage their online spend":

Game design also encourages spending. In games such as FIFA, children can either improve by investing significant time to build up their squad or spend money in the hope of quickly advancing their position. The latter option – to spend money in the hope of progressing – is the most popular option across the sample. With new editions of FIFA being released every year, children feel as though there is an expectation and pressure to buy new players, spend money and build up their team as quickly as possible.

In some cases, this spending was done in order to receive a collection of unknown rewards, so-called loot boxes. The most obvious example of this is FIFA player packs, which some children acknowledged as being similar to gambling.

The lack of guaranteed reward from these purchases can leave some children feeling as though they have wasted their money. The potential to receive a good reward means that children also feel that they are not in control of their spending, and sometimes try to 'chase losses'. In general, children do not have effective strategies to manage their online spend.

161. The Children's Commissioner's official report included quotes from the children being studied that illustrate ways in which loot boxes unfairly exploit adolescent vulnerabilities, including peer pressure and have quickly become the gambification of gaming:

¹¹¹ Children's Commissioner for England, *Gaming the system* (October 2019).

- 1 • “It takes a long time to get somewhere so you just do that [open loot boxes].” – Tim,
- 2 16
- 3 • “It’s like gambling – you could lose your money and not get anyone good, or get
- 4 someone really good.” – Tim, 16
- 5 • “I never get anything out of it [buying packs] but I still do it.” – Lee, 14
- 6 • “You feel like it’s a waste of money...and then you open more.” – Nick, 16
- 7 • “[The excitement] depends on what you’ve got...If you don’t get anyone good it
- 8 makes you angry because you’ve wasted money.” – Nigel, 15
- 9 • “You get told on website or social media when they’re on there [limited-time packs]
- 10 I’ll buy them then.” – Brandon, 15

11 162. The Children’s Commissioner for England concluded the social pressures and “in-

12 game mechanics that normalise spending,” which when “couple[d] with the widespread use of in-

13 game features that produce a random selection of items, encouraged children to over-spend and lose

14 track of how much they were spending.”

15 163. Because of scarcity bias (i.e., humans place a higher value on an object that is scarce),

16 players gamble money to open loot boxes hoping they can win the “rare” loot box items considered

17 more valuable than the “common” items, which are often worthless duplicates.¹¹² Knowing this,

18 loot box purveyors “manufacture rarity (also known as ‘artificial scarcity’) to increase the value of

19 the assets they are selling.”¹¹³ The value of potential loot box prizes is not theoretical. The

20 commercial success of Clash Royale and Brawl Stars—games which have generated hundreds of

21 millions of dollars from loot box sales—“demonstrates that players ‘value’ and are willing to pay

22 for [random loot box rewards] even though they do not possess monetary value” through an in-game

23 cash-out option.¹¹⁴ “[I]t must be accepted that a virtual item, which is not transferable to other

24 _____

25 ¹¹² Luigi Mittone and Lucia Savadori, *The Scarcity Bias*, *Applied Psychology*, 58(3):453-468

(June 9, 2009).

26 ¹¹³ Vili Lehdonvirta, *Virtual item sales as a revenue model: identifying attributes that drive*

27 *purchase decisions*, *Electron Commer Res*, 9:97-113 (Mar. 10, 2009) (“Rarity is perhaps the most

28 socially oriented attribute of virtual goods, because its value is strongly associated with its ability to

distinguish a (small) group of owners from non-owners.”).

¹¹⁴ Leon Y. Xiao, *Which implementations of loot boxes constitute gambling? A UK legal*

1 players and therefore does not have a monetary value, can nonetheless be inherently valued by the
 2 player. This recognition of perceived value as capable of being an incentive to gamble is in
 3 accordance with perspectives from the psychology literature.”¹¹⁵ At the January 2021 Champions
 4 Cup for Electronic Arts’ FIFA soccer mobile video game, players competed against each other using
 5 teams worth \$27,000 based on then-current trading prices.

6 2. Violations of California’s Gambling Control Act and Penal Code § 337j

7 164. Under California’s Gambling Control Act, all “controlled games” constitute
 8 “gambling” and anyone who “exposes for play one or more controlled games that are dealt, operated,
 9 carried on, conducted, or maintained for commercial gain”—including “all persons having a
 10 significant involvement” in exposing such games of chance—s conducting a “gambling enterprise”
 11 or “gambling operation.” See Cal. Bus. & Prof. Code §§ 19805(l) (“‘Gambling’ means to deal,
 12 operate, carry on, conduct, maintain, or expose for play a controlled game.”), 19805(g) (defining
 13 “controlled game” as “any controlled game, as defined by subdivision (e) of Section 337j of the
 14 Penal Code”), 19805(m) (defining “gambling enterprise”), 19805(q) (defining “gambling
 15 operation”).

16 165. Loot boxes constitute a “controlled game” because they are a “game of
 17 chance...played for currency, check, credit, or any other thing of value.” Cal. Penal Code
 18 § 337j(e)(1).

19 166. The marketing and sale of loot boxes also violates the spirit and public policies
 20 behind California’s Gambling Control Act. The Gambling Control Act provides that “gambling can
 21 become addictive and is not an activity to be promoted or legitimized as entertainment for children
 22 and families,” “[u]nregulated gambling enterprises are inimical to the public health, safety, welfare,
 23 and good order,” and no “no person in this state has a right to operate a gambling enterprise except
 24 as may be expressly permitted by the laws of this state and by the ordinances of local governmental
 25

26 *perspective on the potential harms of random reward mechanisms*, Intl J Ment Health Addiction,
 DOI: 10.1007/s11469-020-00372-3 (Aug. 24, 2020).

27 ¹¹⁵ Leon Y. Xiao, *Which implementations of loot boxes constitute gambling? A UK legal*
 28 *perspective on the potential harms of random reward mechanisms*, Intl J Ment Health Addiction,
 DOI: 10.1007/s11469-020-00372-3 (Aug. 24, 2020).

bodies.” *See* Cal. Bus. & Prof. Code §§ 19801(c), (d); *see also* Cal. Bus. & Prof. Code §§ 19850, 19851, 19852 (requiring state gambling licenses).

167. One of the statutes added as part of the Gambling Control Act was Penal Code section 337j. Section 337j makes it unlawful for any person, without having first obtained the necessary gambling licenses, to inter alia, “receive direct or indirectly, any compensation or reward or any percentage or share of the revenue, for keeping, running, or carrying on any controlled game.”

168. By exposing loot boxes for play and receiving revenue from these unlicensed games of chance, Supercell is operating an illegal gambling enterprise that is inimical to the public health.

CLASS ACTION ALLEGATIONS

169. Pursuant to Federal Rule of Civil Procedure 23, Plaintiffs seek certification of a nationwide class consisting of:

All persons who paid to receive randomized virtual items from a purchase (also known as “loot boxes”) within Supercell’s Clash Royale or Brawl Stars video games.

170. The Class excludes Defendant’s officers and directors, current or former employees, including their immediate family members, as well as any judge, justice or judicial officer presiding over this matter and members of their immediate families and judicial staff. Plaintiffs reserve the right to amend the Class definition or include subclasses if discovery and further investigation reveal that the Class should be expanded or otherwise modified.

171. Plaintiffs’ claims are typical of the claims of the members of the Class, because Plaintiffs and all other members of the Class were damaged by the same wrongful conduct committed by Defendant, as alleged more fully herein.

172. Plaintiffs will fairly and adequately protect the interests of the Class. The interests of the class representatives are coincident with, and not antagonistic to, the interests of the other members of the Class.

173. Plaintiffs have retained counsel competent and experienced in the prosecution of class action litigation.

174. Questions of law and fact common to the members of the Class are central here and predominate over questions that may affect only individual members. Among the questions of law and fact common to the Class are:

(a) Whether Defendant's games containing loot boxes and similar mechanisms create and/or exacerbate addictive behaviors in its players;

(b) Whether Defendant's games containing loot boxes and similar mechanisms exploit addictive behaviors in its players;

(c) Whether Defendant's conduct violates Cal. Penal Code §§ 330, *et seq.*;

(d) Whether Defendant's conduct violates California's Gambling Control Act (Cal. Bus. & Prof. Code §§ 19800, *et seq.*);

(e) Whether Defendant's conduct violates the Illegal Gambling Business Act (18 U.S.C. § 1955);

(f) Whether Defendant's conduct violates the Unlawful Internet Gambling Enforcement Act of 2006 (31 U.S.C. §§ 5361-5367);

(g) Whether Defendant violated Business & Professions Code § 17200 by engaging in an "unlawful" business practice by marketing, selling and distributing video games with gambling features and in violation of various state and federal laws as set forth herein;

(h) Whether Defendant violated Business & Professions Code § 17200 by engaging in an "unfair" business practice by marketing, selling and distributing video games with gambling features and that create and/or exacerbate addictive behaviors as alleged herein;

(i) Whether Defendant violated Civil Code §§ 1770(a)(14);

(j) Whether Defendant was unjustly enriched as a result of the conduct alleged herein; and

(k) Whether Defendant's conduct violated the other provisions of statutory and common law outlined in this Complaint.

175. A class action is superior to all other available means for the fair and efficient adjudication of this controversy. Individualized litigation would create the danger of inconsistent or contradictory judgments arising from the same set of facts. Individualized litigation would also

1 increase the delay and expense to all parties and the court system from the issues raised by this
 2 action. The burden and expense that would be entailed by individual litigation makes it
 3 impracticable or impossible for Class members to prosecute their claims individually. Further, the
 4 adjudication of this action presents no unusual management difficulties.

5 176. Unless a class is certified, Defendant will retain monies received as a result of its
 6 improper conduct. Unless an injunction is issued, Defendant will continue to commit the violations
 7 alleged, and will continue to promote and engage in the unfair and unlawful gambling activities
 8 discussed herein. Defendant has acted or refused to act on grounds that are generally applicable to
 9 the Class so that injunctive and declaratory relief is appropriate to the Class as a whole and the
 10 general public.

11 **FIRST CAUSE OF ACTION**

12 **Violation of the “Unlawful Prong” of California’s Unfair Competition Law (“UCL”)** 13 **(Cal. Bus. & Prof. Code §§ 17200, *et seq.*)**

14 177. Plaintiffs reallege and incorporate by reference the allegations set forth in each of the
 15 preceding paragraphs of this Complaint.

16 178. Plaintiffs and Defendant are “persons” within the meaning of the UCL. Cal. Bus. &
 17 Prof. Code § 17201.

18 179. The UCL defines unfair competition to include any “unlawful, unfair or fraudulent
 19 business act or practice.” Cal. Bus. Prof. Code § 17200.

20 180. As a result of engaging in the conduct alleged in this Complaint, Defendant has
 21 violated the UCL’s proscription against engaging in “unlawful” conduct by virtue of its violations
 22 of the following laws:

23 (a) **California’s Gambling Control Act (Cal. Bus. & Prof. Code §§ 19800, *et***
 24 ***seq.*):** Sections 19801 and 19850 of the Gambling Control Act provide that unless licensed, state
 25 law prohibits commercially operated gambling facilities; that no new gambling establishment may
 26 be opened except upon affirmative vote of the electors; that all gambling operations and persons
 27 having significant involvement therein shall be licensed, registered, and regulated; and that all
 28 persons involved in dealing, operating, carrying on, conducting, maintaining or exposing for play

any gambling game shall apply for and obtain a valid state gambling license. Loot boxes constitute a “gambling game” because they are a “controlled game,” which is “any game of chance, including any gambling device...played for currency, check, credit, or any other thing of value that is not prohibited and made unlawful by statute or local ordinance.” Cal. Penal Code § 337j(1). As alleged herein, Defendant operates, carries on, conducts, maintains, and exposes for play gambling activities. Defendant has not applied for or obtained any state gambling license, and therefore violates California’s Gambling Control Act.

(b) **California Penal Code § 330a:** Titled “Possession or keeping of slot or card machine or card dice,” section 330a declares that “[e]very person, who has in his or her possession or under his or her control...or who permits to be placed, maintained, or kept in any room, space, inclosure, or building owned, leased, or occupied by him or her, or under his or her management or control, any slot or card machine, contrivance, appliance or mechanical device, upon the result of action of which money or other valuable thing is staked or hazarded, and which is operated, or played, by placing or depositing therein any coins, checks, slugs, balls, or other articles or device, or in any other manner and by means whereof, or as a result of the operation of which any merchandise, money, representative or articles of value, checks, or tokens, redeemable in or exchangeable for money or any other thing of value, is won or lost, or taken from or obtained from the machine, when the result of action or operation of the machine, contrivance, appliance, or mechanical device is dependent upon hazard or chance...is guilty of a misdemeanor.” Defendant violates section 330a because as alleged, Defendant possesses or permits illegal slot machines or mechanical devices where money or things of value are won or lost upon chance.

(c) **California Penal Code § 330b:** Titled “Possession or keeping of slot machines or devices,” section 330b declares that “[i]t is unlawful for any person to manufacture, repair, own, store, possess, sell, rent, lease, let on shares, lend or give away, transport, or expose for sale or lease, or to offer to repair, sell, rent, lease, let on shares, lend or give away, or permit the operation, placement, maintenance, or keeping of, in any place, room, space, or building owned, leased, or occupied, managed, or controlled by that person, any slot machine or device, as defined in this section.” It is also “unlawful for any person to make or permit the making of an agreement

1 with another person regarding any slot machine or device, by which the user of the slot machine or
 2 device, as a result of the element of hazard or chance or other unpredictable outcome, may become
 3 entitled to receive money, credit, allowance, or other thing of value or additional chance or right to
 4 use the slot machine or device..." As alleged, Defendant has made agreements with Apple, Google,
 5 Plaintiffs, Class Members and others regarding slot machines or devices and permits the operation,
 6 placement, maintenance, or keeping of a slot machine or device as defined by Penal Code § 330b(d).

7 (d) **California Penal Code §§ 330.1 et seq.:** Titled "Manufacture, possession, or
 8 disposition of slot machines or device," section 330.1(a) declares that "Every person who
 9 manufactures, owns, stores, keeps, possesses, sells, rents, leases, lets on shares, lends or gives away,
 10 transports, or exposes for sale or lease, or offers to sell, rent, lease, let on shares, lend or give away
 11 or who permits the operation of or permits to be placed, maintained, used, or kept in any room,
 12 space, or building owned, leased, or occupied by him or her or under his or her management or
 13 control, any slot machine or device as hereinafter defined, and every person who makes or permits
 14 to be made with any person any agreement with reference to any slot machine or device as
 15 hereinafter defined, pursuant to which agreement the user thereof, as a result of any element of
 16 hazard or chance, may become entitled to receive anything of value or additional chance or right to
 17 use that slot machine or device, or to receive any check, slug, token, or memorandum, whether of
 18 value or otherwise, entitling the holder to receive anything of value, is guilty of a misdemeanor."
 19 Defendant violates section 330.1 because as alleged, Defendant has made agreements with Apple,
 20 Google, Plaintiffs, Class Members and others regarding slot machines or devices, or otherwise
 21 possesses or permits illegal slot machines or devices where things of value are won as a result of
 22 chance "irrespective of whether it may, apart from any element of hazard or chance, also sell,
 23 deliver, or present some...entertainment, or other thing of value" (Cal. Penal Code § 330.1(f)). The
 24 randomized prizes that may be won by paying to play a loot box are a "thing of value" as used in
 25 section 330.1 and as defined by section 330.2.

26 (e) **California Penal Code § 337j(a)(1):** By "operat[ing], carry[ing] on,
 27 conduct[ing], maintain[ing], or expos[ing] for play" unlicensed gambling in this state, Defendant
 28 violates Penal Code § 337j(a)(1).

(f) **California Penal Code § 337j(a)(2):** By “receiv[ing], directly or indirectly, any compensation or reward or any percentage or share of the revenue, for keeping, running, or carrying on any controlled game,” Defendant violates Penal Code § 337j(a)(2).

(g) **California Penal Code § 337j(a)(3):** Through the “manufacture, distribut[ion], or repair [of] any gambling equipment within the boundaries of this state” or “receiv[ing], directly or indirectly, any compensation or reward for the manufacture, distribution, or repair of any gambling equipment within the boundaries of this state” Defendant violates Penal Code § 337j(a)(3).

(h) **The Illegal Gambling Business Act of 1970 (18 U.S.C. § 1955) (the “IGBA”):** The IGBA declares it a crime to “conduct, finance, manage, supervise, direct, or own all of part” of an illegal gambling business. Defendant violates the IGBA because its business involves five or more persons, has been in continuous operation for more than thirty days, and violates California’s gambling laws as alleged herein. By managing, directing, or controlling all or part of the conduct alleged herein with respect to the virtual currency and loot boxes, Defendant violates 18 U.S.C. § 1955.

(i) **The Unlawful Internet Gambling Enforcement Act of 2006 (31 U.S.C. §§ 5361-5367) (the “UIGEA”):** The UIGEA makes it illegal for a “person engaged in the business of betting or wagering” to knowingly accept payments “in connection with the participation of another person in unlawful Internet gambling.” 31 U.S.C. § 5363. “Unlawful Internet gambling” is placing, receiving or transmitting a bet or wager through, at least in part, the Internet where such bet or wager “is unlawful under any applicable Federal or State law in the or Tribal lands in which the bet or wager is initiated, received, or otherwise made.” 15 U.S.C. § 5362(10)(a). By accepting payment in connection with unlawful loot box gambling, Defendant has violated the UIGEA.

(j) **Consumers Legal Remedies Act, California Civil Code § 1770(a)(14):** As alleged in the Third Cause of Action below, Defendant’s conduct violates section 1770(a)(14) of the CLRA. Therefore, this constitutes a violation of the UCL’s unlawful prong.

181. Plaintiffs reserve the right to allege other violations of law, which constitute other unlawful business acts or practices. Such conduct is ongoing and continues to this date.

182. Defendant's violations of the UCL continue to this day. Unless restrained and enjoined, Defendant will continue to engage in the unlawful and unfair conduct described herein.

183. Defendant's conduct caused and continues to cause substantial injury to Plaintiffs and the other Class members. As described herein, Defendant promotes, facilitates, and profits off the purchases of loot boxes. But for Defendant's unlawful and unfair conduct, Plaintiffs and Class members would not and could not have entered into the transactions to purchase loot box plays. Plaintiffs have suffered injury in fact and have lost money and property as a result of Defendant's unfair conduct.

184. Plaintiffs, individually and on behalf of all others similarly situated, seek restitution from Defendant of all money obtained from Plaintiffs and the other members of the Class collected as a result of Defendant's unlawful and unfair competition.

185. Plaintiffs and Class members request injunctive relief pursuant to Business and Professions Code section 17203 to enjoin Defendant from continuing the unlawful business practices alleged herein.

186. Plaintiffs, on behalf of the general public, also seek a public injunction in accordance with the McGill Rule (*McGill v. Citibank, N.A.*, 2 Cal. 5th 945 (2017)), requiring Defendant to immediately cease such acts of unlawful business practices.

SECOND CAUSE OF ACTION

Violation of the "Unfair Prong" of California's Unfair Competition Law ("UCL") (Cal. Bus. & Prof. Code §§ 17200, *et seq.*)

187. Plaintiffs reallege and incorporate by reference the allegations set forth in each of the preceding paragraphs of this Complaint.

188. Plaintiffs and Defendant are "persons" within the meaning of the UCL. Cal. Bus. & Prof. Code § 17201.

189. The UCL defines unfair competition to include any "unlawful, unfair or fraudulent business act or practice." Cal. Bus. Prof. Code § 17200.

190. As a result of engaging in the conduct alleged in this Complaint, Defendant has violated the UCL's proscription against "unfair" business practices.

191. Defendant's unfair conduct alleged in this Complaint is illegal, immoral and unscrupulous. Loot boxes foster and encourage compulsive and addictive behaviors as with gambling. They are in essence slot machines or, in the alternative, from a psychological standpoint, are similar to slot machines, with all of the same sophisticated gambling-like structural hooks, elements, and cognitive traps that lead to addiction and the associated psychological and financial harms. Scientists have concluded that loot boxes are linked to problem gambling by an order of magnitude larger than risk factors such as depression and drug use.¹¹⁶ However, because Defendant has prioritized profit over ethics, Defendant makes loot boxes available to purchase by children and families at all hours, in any place, and without any spending limitation whatsoever.

192. Defendant's unfair conduct also violates legislatively declared policies articulated in, inter alia, California's Gambling Control Act (Cal. Bus. & Prof. Code §§ 19800, *et seq.*), California Penal Code § 337j, California's gambling device statutes (Penal Code §§ 330a, 330b and 330.1), the Illegal Gambling Business Act (18 U.S.C. § 1955), and the Unlawful Internet Gambling Enforcement Act of 2006 (31 U.S.C. §§ 5361-5367) by making agreements with respect to illegal games of chance or gambling devices, permitting agreements to be made with respect to illegal games of chance or gambling devices, conducting illegal and unlicensed gambling business including at places not suitable for gambling activities, permitting or possessing loot boxes which are illegal games of chance or gambling devices, knowingly accepting payments in connection with unlawful gambling, and promoting predatory gambling as entertainment for children and families.

193. California's Legislature found and declared that "Gambling can become addictive and is not an activity to be promoted or legitimized as entertainment for children and families." Cal. Bus. & Prof. Code § 19801(c). In violation of this public policy, Defendant's conduct as described in this Complaint promotes, facilitates, legitimizes, and profits off addictive gambling activities

¹¹⁶ See, e.g., James Close & Joanne Lloyd, *Lifting the Lid on Loot-Boxes: Chance-Based Purchases in Video Games and the Convergence of Gaming and Gambling*, GambleAware (April 2021), https://www.begambleaware.org/sites/default/files/2021-03/Gaming_and_Gambling_Report_Final.pdf

1 masqueraded as entertaining video games that are marketed, sold and made available to children
2 and families.

3 194. California's Legislature also found and declared that "Unregulated gambling
4 enterprises are inimical to the public health, safety, welfare, and good order. Accordingly, no person
5 in this state has a right to operate a gambling enterprise except as may be expressly permitted by the
6 laws of this state and by the ordinances of local governmental bodies." Cal. Bus. & Prof. Code
7 § 19801(d). In violation of this public policy, Defendant operates unregulated gambling enterprises
8 that are inimical to the public health, safety, welfare, and good order. Defendant has not been
9 permitted by the laws of this State and by ordinances of local governmental bodies to engage and
10 operate the gambling enterprise described herein.

11 195. California's Legislature also found and declared that "no new gambling
12 establishment may be opened in a city, county, or city and county in which a gambling establishment
13 was not operating on and before January 1, 1984, except upon the affirmative vote of the electors of
14 that city, county, or city and county." Cal. Bus. & Prof. Code § 19801(e). In violation of this
15 Legislative finding and public policy, Defendant has opened a gambling establishment through its
16 sale of virtual currency and loot boxes without first receiving the affirmative vote of the electors of
17 any city or county in this State.

18 196. California's Legislature also found and declared that "Public trust that permissible
19 gambling will not endanger public health, safety, or welfare requires that comprehensive measures
20 be enacted to ensure that gambling is free from criminal and corruptive elements, that it is conducted
21 honestly and competitively, and that it is conducted in suitable locations." Cal. Bus. & Prof. Code
22 § 19801(g). In violation of this public policy, and undermining "public trust," Defendant has brought
23 unregulated gambling into the homes and pockets of tens of millions of consumers, including
24 children – 24/7 locations which are not "suitable" to protect the public from the from the dangers of
25 gambling. California's Legislature also found and declared that "All gambling operations, all
26 persons having a significant involvement in gambling operations, all establishments where gambling
27 is conducted, and all manufacturers, sellers, and distributors of gambling equipment must be
28 licensed and regulated to protect the public health, safety, and general welfare of the residents of

1 this state as an exercise of the police powers of the state.” Cal. Bus. & Prof. Code § 19801(g).
 2 Further, “All gambling operations, all persons having a significant involvement in gambling
 3 operations, all establishments where gambling is conducted, and all manufacturers, sellers, and
 4 distributors of gambling equipment must be licensed and regulated to protect the public health,
 5 safety, and general welfare of the residents of this state as an exercise of the police powers of the
 6 state.” Cal. Bus. & Prof. Code § 19801(i). “Gambling operations” as defined by California’s
 7 Gambling Control Act means “exposing for play one or more controlled games that are dealt,
 8 operated, carried on, conducted, or maintained for commercial gain.” Cal. Bus. & Prof. Code
 9 § 19805(p). In violation of this public policy, which is intended to inter alia, “protect the public
 10 health, safety, and general welfare of the residents of this state, Defendant has significant
 11 involvement in gambling operations and exposes the loot box games of chance (which are
 12 “controlled games”) for play but is not licensed or regulated.

13 197. Defendant’s unfair conduct also includes and arises from promoting, facilitating and
 14 profiting from conduct designed to create and exploit addictive tendencies in vulnerable minors and
 15 adults alike. Indeed, as the academic research discussed in this Complaint demonstrates, regardless
 16 whether Supercell permits “cashing out” the loot box prizes won in Clash Royale or Brawl Stars,
 17 the loot boxes at issue, which rely on abusive game mechanics and designed psychological
 18 manipulations, are predatory, harmful and addictive. Loot boxes have also been demonstrated
 19 (González-Cabrera 2022) to have a positive and significant relationship with Internet Gaming
 20 Disorder and Online Gambling Disorder. These serious diseases that can destroy lives result from
 21 stimuli that trigger the brain’s reward system much like drugs or alcohol can. These progressive
 22 addictions are impulse control disorders, and do not result from a lack of willpower.

23 198. Defendant has omitted important information and mislead parents of vulnerable
 24 minors and adolescents and others concerning the compulsive, addictive, costly, and random chance
 25 nature of the loot box mechanism and its use in its Clash Royale and Brawl Stars video games.
 26 According to psychologists, loot boxes are a “predatory monetization scheme”:

27 ///

28 ///

Predatory monetization schemes in video games are purchasing systems that disguise or withhold the long-term cost of the activity until players are already financially and psychologically committed. Such schemes contribute to the increasing similarity of gaming and gambling and the potential for financial harm for those with Internet gaming disorder.¹¹⁷

199. Defendant also has engaged in unfair business practices under the “balancing test.” Defendant’s conduct offends established public policies and is immoral, unethical, oppressive, unscrupulous, or substantially injurious to consumers. There is no utility to Defendant’s unethical conduct, which creates a gateway to problem gambling, Internet Gaming Disorder, Online Gambling Disorder, promotes and reinforces addictive behavior, and markets and sells gambling as entertainment to families, children, and other vulnerable populations. Meanwhile, the gravity of harm from Defendant’s unfair conduct is substantial—creating and reinforcing addictive behavior to the financial, social, and psychological detriment of families, children and other vulnerable populations. Some of the impacts of problem gambling include mental health problems (depression, anxiety, stress, reduced self-worth, suicidal thoughts), cross-addiction (increase use of alcohol, drugs, cigarettes etc.), physical health problems (insomnia, headaches, back or neck pain, lung problems, stomach upset etc.), school or work problems (absenteeism, decreased productivity, stealing etc.), financial problems (loss of income, inability to pay bills, increased debt, bankruptcy etc.), legal problems (arrests/incarceration, inability to meet legal financial obligations such as child support etc.), self-care problems (poor eating habits / nutrition, unhealthy personal hygiene etc.), and social problems (arguments, strained relationships, failure to meet responsibilities, alienation, separation, divorce, physical or mental abuse etc.). Problem gambling behavior affects more than just the gambler: it can have negative consequences for the gambler’s family and loved ones, children, workplace, and community.

200. Defendant has also engaged in “unfair” business practices under the “tethering” test. Defendant’s unfair practices violate public policies that are tethered to specific constitutional, statutory, or regulatory provisions and thereby “violate the policy or spirit” of those provisions. *Cel-*

¹¹⁷ King DL, Delfabbro PH. *Predatory monetization schemes in video games (e.g. ‘loot boxes’) and internet gaming disorder*. *Addiction*. 2018 Nov;113(11):1967-1969. doi: 10.1111/add.14286. Epub 2018 Jun 28. PMID: 29952052.

1 *Tech Comms., Inc. v. Los Angeles Cellular Telephone Co.*, 20 Cal. 4th 163, 187 (1999). As alleged
 2 herein, California's Gambling Control Act (Bus. & Prof. Code §§ 19800, *et seq.*), California Penal
 3 Code §§ 330, *et seq.*, the Illegal Gambling Business Act (18 U.S.C. § 1955), and the Unlawful
 4 Internet Gambling Enforcement Act of 2006 (31 U.S.C. §§ 5361-5367) each declare that unlicensed
 5 or unregulated gambling or gambling activities are inimical to the public health, safety, welfare, and
 6 good order, and are not to be promoted or legitimized as entertainment for children or families.
 7 Indeed, because even watching gambling take place acts as a gambling gateway for youth,
 8 California's Gambling Control Act provides that no person under 21 years of age is permitted to
 9 enter a gambling establishment. Cal. Bus. & Prof. Code § 19921. Defendant's unfair conduct
 10 violates these legislatively tethered public policies.

11 201. Defendant also engaged in "unfair" business practices under the "FTC Act" test. As
 12 alleged, the injury to Plaintiffs and Class members is substantial, the injury is not outweighed by
 13 any countervailing benefits to consumers or competition, and particularly given the addictive,
 14 predatory, and surreptitious nature of the conduct at issue, the injury is such that it could not
 15 reasonably have been avoided.

16 202. There is no societal benefit from Defendant's conduct which includes promoting and
 17 facilitating harmful and addictive conduct, including gambling as entertainment for children and
 18 families. There is only harm from Defendant's conduct. While Plaintiffs were harmed, Defendant
 19 was unjustly enriched by its deceptive, predatory, and harmful conduct. As a result, Defendant's
 20 conduct is "unfair" because it offended established public policies. Further, Defendant engaged in
 21 immoral, unethical, oppressive, and unscrupulous activities that are substantially injurious to
 22 consumers as the gravity of Defendant's conduct outweighs any alleged benefits attributable to such
 23 conduct.

24 203. There were reasonably available alternatives to further Defendant's legitimate
 25 business interests other than the conduct described herein.

26 204. Defendant's violations of the UCL continue to this day. Unless restrained and
 27 enjoined, Supercell will continue to engage in the unlawful and unfair conduct described herein.
 28

205. Defendant's conduct caused and continues to cause substantial injury to Plaintiffs and the other Class members. As described herein, Defendant promotes, facilitates, and profits from the marketing and sale of unscrupulous and immoral products and services, including loot boxes. But for Defendant's unlawful and unfair conduct, Plaintiffs and Class members would not and could not have entered into the transactions to purchase loot box plays. Plaintiffs have suffered injury in fact and have lost money and property as a result of Defendant's unfair conduct.

206. Plaintiffs, individually and on behalf of all others similarly situated, seek restitution from Defendant of all money obtained from Plaintiffs and the other members of the Class collected as a result of Defendant's unfair competition.

207. Plaintiffs and Class members request injunctive relief pursuant to Business and Professions Code section 17203 to enjoin Defendant from continuing the unfair business practices alleged herein.

208. Plaintiffs, on behalf of the general public, also seek a public injunction in accordance with the McGill Rule (*McGill v. Citibank, N.A.*, 2 Cal. 5th 945 (2017)), requiring Defendant to immediately cease such acts of unfair business practices.

THIRD CAUSE OF ACTION

Violation of the Consumers Legal Remedies Act ("CLRA") (Cal. Civ. Code §§ 1750, *et seq.*)

209. Plaintiffs reallege and incorporate by reference the allegations set forth in each of the preceding paragraphs of this Complaint.

210. This claim for relief is brought pursuant to the CLRA. Plaintiffs and members of the class are "consumers," as that term is defined by Civil Code § 1761(d), because they spent money on Defendant's video game virtual currency, loot boxes and Supercell's services in providing the games and selling the loot boxes at issue for personal, family, or household purposes.

211. The conduct alleged in this Complaint constitutes unfair methods of competition and unfair and deceptive acts and practices for the purposes of the CLRA and were undertaken by Defendant in transactions intended to result in, and which resulted in, the sale of goods or services

1 to consumers; namely, the sale of virtual currency, loot boxes and Supercell's services in providing
2 the games and selling the loot boxes at issue.

3 212. As a result of Defendant's conduct, Plaintiffs and Class members purchased
4 Defendant's loot box-related goods or services, which are prohibited by law.

5 213. By engaging in the conduct described herein, Defendant has violated subdivision
6 (a)(14) of California Civil Code § 1770 by "Representing that a transaction confers or involves
7 rights, remedies, or obligations that it does not have or involve, or that are prohibited by law." Under
8 this provision, omissions are actionable.

9 214. Defendant violated the CLRA by representing to or omitting from Plaintiffs and
10 Class members that the transactions involving loot boxes confer or involve rights to potentially
11 valuable prizes, when in fact these transactions constitute unlawful gambling transactions that are
12 prohibited by law, foster compulsive and addictive behavior, are not suitable for children, teenagers
13 and many adults, and are a predatory form of duplicitously profiting from others. These omissions
14 are material because a reasonable consumer would deem them important in determining how to act
15 in the transaction at issue and, if prohibited by law, should not have been permitted to purchase loot
16 box plays. Further, the omissions about loot boxes are misleading in light of other facts that
17 Defendant did disclose.

18 215. Defendant's violations of the CLRA proximately caused injury in fact to Plaintiffs
19 and the Class.

20 216. Plaintiffs and the Class members transacted with Defendant on the belief that the
21 transaction was lawful. Indeed, a reasonable consumer believes in the lawfulness of his or her
22 transactions.

23 217. Pursuant to Cal. Civ. Code § 1782(d), Plaintiffs, individually and on behalf of the
24 other members of the Class, seek a Court order enjoining the above-described wrongful acts and
25 practices of Defendant and for restitution and disgorgement.

26 218. Plaintiffs, on behalf of the general public, seek a public injunction in accordance with
27 the McGill Rule (*McGill v. Citibank, N.A.*, 2 Cal. 5th 945 (2017)), requiring Defendant to
28 immediately cease such acts of unlawful business practices.

219. Pursuant to Cal. Civ. Code § 1782(a), Defendant was notified in writing by certified mail of the particular violations of Section 1770 of the CLRA, which notification demanded that Defendant rectify the problems associated with the actions detailed above and give notice to all affected consumers of Defendant's intent to so act. A copy of the letter is attached as Exhibit A to the Complaint filed August 11, 2020. *See* ECF No. 1-1.

220. Defendant has failed to rectify or agree to rectify the problems associated with the actions detailed above or give notice to all affected consumers within 30 days of the date of written notice pursuant to § 1782 of the Act. Therefore, Plaintiffs further seek claims for actual, punitive and statutory damages, as appropriate.

221. Defendant's conduct is fraudulent, wanton, and malicious.

222. Pursuant to § 1780(d) of the Act, attached as Exhibit B to the Complaint filed on August 11, 2020 (ECF No. 1-2) is the affidavit showing that this action has been commenced in the proper forum.

FOURTH CAUSE OF ACTION

Unjust Enrichment

223. Plaintiffs realleges and incorporates by reference the allegations set forth in each of the preceding paragraphs of this Complaint.

224. By its wrongful acts and omissions, Defendant was unjustly enriched at the expense of and to the detriment of Plaintiffs and the Class. Defendant was unjustly enriched as a result of the compensation it received from the marketing and sale of the unlawful and unfair loot boxes to Plaintiffs and the members of the Class and the virtual currency it intended and reasonably and foreseeably knew was being purchased to wager on loot boxes.

225. Because of Supercell's conduct, two of its video games marketed as appropriate for children as young as nine years old have become a gateway to addictive and compulsive behavior, including problem gambling behavior, Internet Gaming Disorder, Online Gambling Disorder, and their well-established, associated financial, social, and mental harms. Supercell has received billions of dollars off its conduct which promotes and legitimizes addictive and compulsive harmful behavior, including gambling as a form of entertainment for children and families.

226. Supercell's loot box scheme intentionally targets children and vulnerable persons who become trapped in an addictive cycle of spending money to open loot boxes. Supercell is using all the psychological tricks of a Las Vegas casino to foster and exploit compulsive behavior among the most vulnerable with one goal in mind: lining its own pockets.

227. It is only reasonable that if Supercell's games employ an element of gambling to make money, such wagers be treated and regulated as any other form of gambling.

228. Plaintiffs and the Class seek restitution from Defendant and seek an order of this Court disgorging all profits, benefits, and other compensation obtained by Defendant from its wrongful conduct.

229. Plaintiffs and the Class have no adequate remedy at law.

PRAYER FOR RELIEF

WHEREFORE, Plaintiffs, on behalf of themselves and all others similarly situated, pray for relief in this Complaint as follows:

(a) For an order certifying the Class as requested herein;

(b) For restitution and disgorgement of the revenues wrongfully retained as a result of Defendant's wrongful conduct;

(c) For declaratory and injunctive relief as permitted by law or equity, including enjoining Defendant from continuing the unlawful practices as set forth herein;

(d) For actual and statutory damages;

(e) For an award of attorney fees, where applicable;

(f) For an award of costs; and

(g) For any and all other relief the Court deems just and appropriate.

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DEMAND FOR JURY TRIAL

Based on the foregoing, Plaintiffs, on behalf of themselves, and all others similarly situated, hereby demand a jury trial for all claims so triable.

Respectfully submitted,

Dated: October 19, 2021

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By: *s/ Timothy G. Blood*

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CERTIFICATE OF SERVICE

I hereby certify that on October 19, 2021, I electronically filed the foregoing with the Clerk of the Court using the CM/ECF system which will send notification of such filing to the e-mail addresses denoted on the Electronic Mail Notice List, and I hereby certify that I have mailed the foregoing document or paper via the United States Postal Service to the non-CM/ECF participants indicated on the Electronic Mail Notice List.

I certify under penalty of perjury under the laws of the United States of America that the foregoing is true and correct. Executed on October 19, 2021, at San Diego, California.

s/ Timothy G. Blood

TIMOTHY G. BLOOD

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